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THE
HISTORY OF MODERN EDUCATION
AN ACCOUNT OF THE
COURSE OF EDUCATIONAL OPINION AND PRACTICE
FROM THE REVIVAL OF LEARNING
TO THE PRESENT DECADE

BY
SAMUEL G. WILLIAMS, Ph.D.
(1)
PROFESSOR OF THE SCIENCE AND ART OF TEACHING
IN CORNELL UNIVERSITY

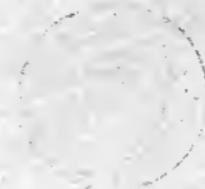


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PREFACE.

This book has grown out of the lectures given by the author in Cornell University during the past six years, and it comprises the last half of his course on the history of education. There should be a place, not only amongst teachers, but also in a very considerable class of enlightened friends of education, for a work depicting in a moderate compass the rise and development of modern methods of instruction, the growth of educational systems and organizations, and the course of modern ideas of education as revealed in the works of representative men. Though much that may be given in such a work naturally has its important forerunners in far earlier ages, still the course of educational events since the revival of learning in the 15th century, has in itself such a degree of self-dependence as adapts it for separate treatment. Besides, it is probable that many persons who would be eager to know the more recent precursors of the present condition of education, would be less interested in ancient and mediæval methods and means of instruction, or in the ideas of education expressed by ancient sages; at least until a knowledge of later educational history should have excited in them the desire for an acquaintance with the fathers of educational efforts and thought. With this view this book is offered to the public.

The chief difficulty in its preparation has arisen from the abundance and complexity of the materials that have been presented. An attempt has been made, by a careful selection of truly representative facts and personages, by a rigid exclusion of all other matters however intrinsically interesting, and by treating the several centuries from the standpoint of what in them seemed most characteristic, to construct a narrative which should be truthful and perspicuous without being unduly bulky. The reader will judge how far this attempt has been successful.

The works to which the author has been specially indebted have been so frequently mentioned in the following pages that it seems needless to euumerate them here.

A question by a judicious friend with regard to the statement on page 99 of the amount of Mulcaster's salary, called attention to the need of a remark on the relative purchase power of money in the 16th century and at present, when it was too late to introduce it in the proper place. Mr. Thorold Rogers, who is a good authority in such matters, gives the ratio of about twelve to one as holding good between 1480 and the last third of the present century. Hence, as some decrease of purchase power had occurred before Mulcaster's time, the ratio 10 to 1 has been assumed as approximately correct.

At page 29, line 4 read *Latin classics* instead of "classic languages;" also at page 90 line 8, instead of "arithmetic," read *mathematics and astronomy*.

ITHACA, July, 1892.

TABLE OF CONTENTS.

CHAPTER I.

	<i>Pages.</i>
PRELIMINARIES OF MODERN EDUCATION.—Sketch of Ancient Education—Mediæval Moslem learning—Mediæval culture of the Byzantines—Mediæval universities of Europe, their studies and methods—Precursors of the Renaissance-----	9-21

CHAPTER II.

THE RENAISSANCE AND SOME INTERESTING PHASES OF EDUCATION IN THE 16TH CENTURY.—Effect of Geographic discoveries and the growth of modern languages—Effects of the revival of learning north and south of the Alps—The Renaissance has the character of a classic revival—Great extension of middle-class education in England and Germany—School training regarded somewhat as a preparation for life—Origin of idea of universal and compulsory education-----	22-45
--	-------

CHAPTER III.

EDUCATIONAL OPINIONS OF THE 16TH CENTURY.—Martin Luther—Erasmus—Vives—Ramus—Rabelais—Montaigne-----	46-83
---	-------

CHAPTER IV.

DISTINGUISHED TEACHERS OF THE 16TH CENTURY.—Melanchthon—Sturm—Trotzendorf—Neander—Ascham—Mulcaster—The Jesuits-----	84-107
---	--------

CHAPTER V.

SOME CHARACTERISTICS OF EDUCATION IN THE 17TH CENTURY.—Predominance of Latin for utilitarian ends—Influence of ecclesiasticism in education—Influence of the philosophers in education—Bacon—Descartes—Fleury—Efforts of educational reformers.....	108-125
---	---------

CHAPTER VI.

PRINCIPLES OF THE EDUCATIONAL REFORMERS.—Obstacles to their rapid acceptance.....	126-139
---	---------

CHAPTER VII.

THE 17TH CENTURY REFORMERS.—Wolfgang Ratich—John Amos Comenius and his works—The Port Royalists—Milton—Locke.....	140-196
---	---------

CHAPTER VIII.

FEMALE EDUCATION AND FENELON.—St. Jerome and conventional education—Port Royalists—Mme. de Maintenon—Fenelon—Pedagogic works and opinions of Fenelon.....	197-216
---	---------

CHAPTER IX.

THE ORATORY OF JESUS, AND BEGINNING OF AMERICAN EDUCATION.—The Oratory in France—Bernard Lamy—Thomassin—Early American efforts—Founding of William and Mary college—New York—New England—Early Harvard—First school laws of Massachusetts—State of education in England, France, Germany, and Scotland.....	217-229
---	---------

CHAPTER X.

CHARACTERISTICS OF EDUCATION IN THE 18TH CENTURY.—Pietistic movement and Francke—Real school movement—Professional training of teachers—Rise of modern university spirit—Rise of new Humanism.....	230-252
--	---------

CHAPTER XI.

IMPORTANT EDUCATIONAL TREATISES OF THE 18TH CEN-
--

TURY.—Rollin's <i>Traité des Etudes</i> —Rousseau's <i>Emile</i>	
—Kant.....	253-287

CHAPTER XII.

BASEDOW AND THE PHILANTHROPINIC EXPERIMENT.....	288-298
---	---------

CHAPTER XIII.

PESTALOZZI AND HIS WORK.—Neuhof—Leonard and Gertrude—Stanz—Burgdorf—Yverdun and his Insti- tution—Fundamental Principles.....	299-316
---	---------

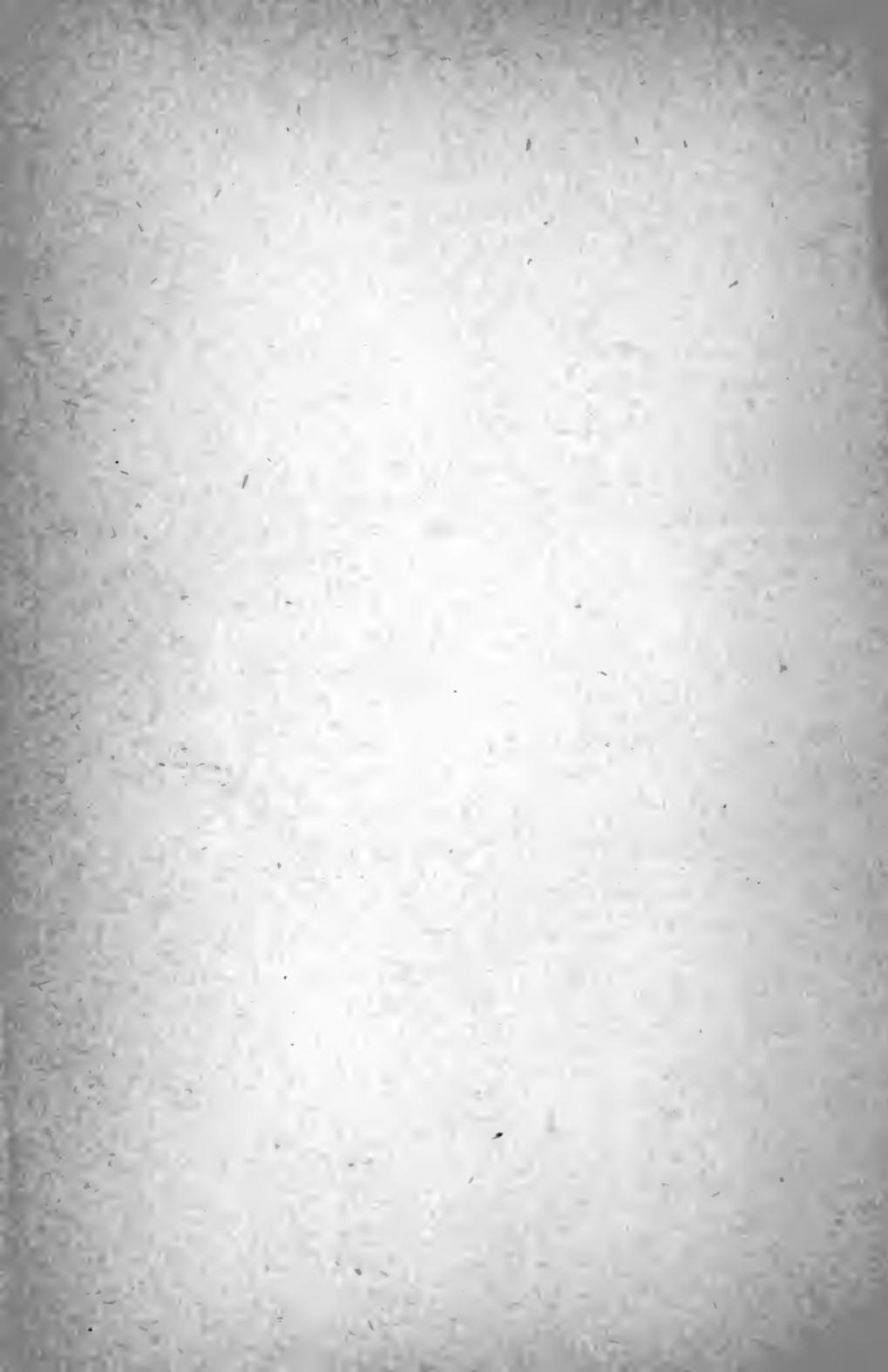
CHAPTER XIV.

GENERAL REVIEW OF EDUCATION IN THE 18TH CEN- TURY.—England—France—Austria—Felbiger—Kin- dermann—Germany—Prussia—Von Rochow — New England—Early text-books—New York — Colleges of 18th century—University of the State of New York ..	317-330
--	---------

CHAPTER XV.

EDUCATIONAL CHARACTERISTICS OF THE 19TH CENTURY.	
--	--

—Great activity in literature, etc.—Herbert Spencer's “Education”—General diffusion of popular educa- tion—Froebel — Professional training of teachers— Supervision of schools—Industrial and Manual train- ing—Improvements in method—The Kindergarten— Discussion of relative disciplinary value of studies— Conclusion.....	331-391
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THE HISTORY OF MODERN EDUCATION.

CHAPTER I.

PRELIMINARIES OF MODERN EDUCATION.

The history of modern education has for its field the period which extends from the revival of learning in the 15th and 16th centuries, called the Renaissance, down to the times in which we ourselves are actors. But the Renaissance had its inciting causes and its favoring circumstances in the times by which it was preceded ; and a highly important cause, the preservation of the ancient Greek learning, was due to events which occurred several centuries earlier than the period of which we are to treat. Likewise much that is of quite vital interest to the right understanding of modern education had its origin in the past, and often in a remote antiquity. Educational arrangements analogous to those now existing, educational ideas of perennial influence among educators, and means of education that are still used in schools, are an inheritance from ancient times, and link the present closely with a distant past. Hence a brief survey of some significant facts in earlier history is an essential preliminary to our undertaking.

First let it be recalled that many of the Eastern nations, notably the Chinese, the Hindoos, the Israel-

ites, and the Egyptians, had educational arrangements well adapted to the ideas that prevailed among them, and from them important elements of culture have descended to us. The Hindoos are believed to have originated the decimal system of arithmetical notation which has been transmitted to us through Arabian channels. The important device of a phonic alphabet, long credited to the Phœnicians, has recently been ascribed to the Egyptians; and the history of ancient Egyptian culture assumes a growing importance to modern education as investigation penetrates deeper into its dark places.

The Athenians gave an admirable education to their boys, and Athens and several of the Greek colonies, some centuries before the Christian era, had arrangements for the higher training of youth which are the prototypes of our modern university idea.

In Rome, during the reign of the earlier emperors, there had grown up by private initiative a series of schools which presents striking analogies with some modern systems.

The developing method of Socrates and the illustrative method of Christ are models after which the teachers of to-day might well pattern; and educational ideas first expressed by Plato and Aristotle, by Seneca and Quintilian, and by the Greco-Roman Plutarch, are still current on the lips of educators, often with little thought of their ancient origin.

None will need to be reminded that Greece and Rome had, before the Christian era, developed an art

and a literature, which were the immediate sources of inspiration to the Renaissance, which were long the predominant means of culture in the schools of the modern period, and which still hold deservedly a high place in most institutions for higher education. After Grecian literature and philosophy had ceased to be productive, a science of grammar was originated from the anatomical study of language, and had attained a good degree of completeness in the first century A. D. Aristotle gave to Deductive Logic the form which it has retained until the present century. Rhetoric, in the hands of Quintilian, took the form of a singularly complete science, and Euclid wrought his own work and that of his predecessors into a treatise on Geometry which has never been wholly superseded.

In all these subjects of school instruction the modern period is deeply indebted to the ancient world; in the mathematics aside from Geometry, and in the sciences of nature, however, it owes comparatively little to the ancients; although treatises on Geography, Astronomy, and Natural History, which for many centuries were authoritative, were written by men like Strabo, Ptolemy, Aristotle, and Pliny.

To the downfall of the Roman empire succeeded in Western Europe six centuries of social confusion, lawless violence, and consequent dense ignorance. Learning had little encouragement save among the clergy, many of whom, however, were grossly ignorant; books, which could be multiplied only by the slow process of copying on expensive materials, were

scarce and enormously dear ; the Latin language in which books were written, became progressively unintelligible to the various nationalities which slowly segregated themselves from the seething mass of barbarian invaders ; and, during this period of darkness, the means of culture found their chief refuge in the monasteries.

During this deplorable period, however, learning elsewhere than in Western Europe was not left wholly without witness ; otherwise our present condition would in all human probability be much less favorable than it is. In the Eastern Empire and amongst the followers of Mohammed learning flourished whilst Christian Europe was sunk in ignorance. Both drew their inspiration from the old Greek culture, the former directly, the latter through translation.

The Moslem learning which sprang into prominence early in the 8th century, spread rapidly through Northern Africa and penetrated into Spain, where a brilliant Moslem empire existed until the 15th century. The arts and industries flourished ; a rich imaginative literature took on such proportions that the library of one of the caliphs is said to have had 400,000 volumes ; schools abounded, and the elements of knowledge reached every household ; universities were founded of such note that in the 10th and 11th centuries ambitious youth from Italy and Gaul resorted thither, undeterred by the tales of necromancy and devil's lore which ignorant Europe believed of the arts cultivated by Moslem Spain ; and influences

thence derived not only aided to stimulate the growth of universities in Europe in the 12th century, but also seem to have impressed themselves in some degree on the *form* of the instruction there given.

The Byzantine Greeks whose literary centre was Constantinople, were the inheritors of the old Greek culture. This culture suffered an eclipse during the 7th and 8th centuries in consequence of fierce dynastic and theological struggles, but in the 9th century it revived afresh, and for more than six centuries, under the fostering care of the emperors, it displayed that kind of vigor which consists rather in marking time than in advancing. In other words, the Byzantines showed no capacity for original production ; but they industriously collected the precious monuments of their ancestral philosophy and literature, multiplied them by transcription, and finally, in the 14th and 15th centuries, furnished them unchanged to Italy where they became the inspiring cause of the Renaissance and of the beginnings of modern education. It may be said that Sir Walter Scott in his Count Robert of Paris gives a lively picture of the splendors of Constantinople and of its literary diletantism at the time of the crusades.

The Mediæval Universities of Europe, some knowledge of which is essential for our purpose, were the unique product of an intellectual uprising which began near the close of the 11th century, and which had several causal antecedents of which one has been mentioned above. The earliest of them, those of

Bologna, Paris, and Oxford, sprang from obscure beginnings, so obscure indeed that it is impossible to assign any exact date to their origin: they were not founded but grew out of the intellectual wants of the times. Those founded later by popes and princes, including all the earlier universities of Germany, generally modeled themselves on the University of Paris which was considered the "mother of universities." We have no present need to consider the structure and the privileges of these venerable republics of letters. What alone concerns us is their studies and their methods of instruction.

The studies of the universities were usually classed as the Sciences, and the Arts: at the head of the first stood Theology including the Scholastic Philosophy, followed by Jurisprudence and Medicine: by the term Arts, was intended the seven liberal arts of the Middle Ages, but chiefly the Trivium, i. e., Grammar, Rhetoric, and Logic, all three of which were presented in their most formal and barren aspects, and illustrated by passages from some of the classical Roman authors. The *Sciences* were pursued in treatises which in medicine had come from the Greeks or Moors, in Law, from the Romans or the papal decisions, and in Theology-Philosophy, from the earlier Schoolmen. These were treated as *authoritative*: they were studied, and might be illustrated, explained, and commented on, but not criticised nor doubted.

In considering the methods of the universities it must be remembered that printing was not yet in-

vented, and that hence books were very scarce and very dear. Hence the method of teaching was of necessity oral. The professor *read*, i. e., dictated his author with his own comments and explanations if he chose to make them, and the students copied verbatim. Hence progress was necessarily slow. A more peculiar and characteristic feature of their method was the practice of disputation which, borrowed from the Moorish schools, and applied to the definitions and subtle distinctions of the scholastic philosophy and theology, soon invaded every department of study in universities, and spread to whatever lower schools existed. It grew to be counted as of the very essence of teaching: students and teachers prided themselves on their ability to sustain with equal ease either side of any question, always within the limits of their *authorities*: and these verbal duels were conducted with such heat, that the opposing sides were apt to come to blows unless separated by barriers. This practice of disputation doubtless trained men to skill in reasoning, confirmed their grasp of subjects, and made them acute and dextrous in subtle verbal distinctions rather than profound; but it must have tended powerfully to unsettle men's convictions that there can be any absolute truth, since all might be explained and refined away.

In these methods and studies, both schools and universities were confirmed and fixed by four centuries of undisputed use. Entrenched thus in unalterable prepossessions, they naturally became the most for-

midable opponents of the Renaissance, and were long the most serious obstacles to the spread of the New Learning; for this reason it has been needful that they should here be thus briefly described.

Guizot in his History of Civilization in Europe,* in stating the causes which produced the rapid advances in European civilization during the centuries succeeding the 15th, has also most clearly stated the immediate precursors of the educational Renaissance. These were,—(1) the strengthening of the powers of the central governments in all European states, thus assuring a greater measure of order and legal security for persons and property: (2) the vain attempts at ecclesiastical reform through church councils, and the equally abortive efforts for popular religious reform, which, through the suppression of outward signs of discontent consequent on their failure, possibly made the outbreak that ensued more violent: (3) the use in the official intercourse among nations of the arts of diplomacy, which now came into vogue, and which, by demanding a knowledge of other nationalities as to their history, their resources, and their modes of living and thinking, prompted men to a kind of culture heretofore unknown and thus became a powerful means of enlightenment: (4) the important inventions which came into active use in the 15th century, of which the most interesting to us is the art of printing: and (5) the revival of interest in the study of the Greek classics which, beginning in Italy,

* Lecture XI.

spread thence to other European countries, recalling the minds of men to a communion with the past intellectual achievements of their race, and inciting them to a freedom of thought and an activity of personal investigation that was fraught with the most vital consequences to the future of learning.

The first two of these facts are of interest to the student of educational history chiefly because they afforded conditions favorable to the spread of learning,—the first because it assured a degree of social order without which learning must languish, and the second because religious unrest tended to free men's minds from the bonds of mere authority by which all real progress in science had hitherto been prevented. The needs created by the growth of diplomacy have an interest of a different kind, since thus was promoted a cultivation of branches hitherto greatly neglected, prominent among which were history, geography, and international ethics.

It would be difficult for us to conceive how great a change in the fortunes of education was wrought by the invention of printing, and by the introduction of linen paper into common use which occurred at nearly the same time.* Heretofore, not only had transcription been slow and costly, but the fabric on which to write had also been costly, both causes preventing a rapid multiplication of books. Henceforth all this was changed ; and ready access to books affected education in all classes of schools in many ways. It

* Hallam. Middle Ages, C. IX, part 2d.

made necessary a radical change in the method of teaching, since dictation was no longer necessary : it released the students from copying, changed their use of memory to an exercise of understanding, and greatly lessened the time needed for acquiring knowledge : it demanded from professors more originality of work, since through print their thoughts might readily be compared with those of others : finally, it rendered the clientele of universities more largely local, by making it unnecessary for students to travel far to hear the words of some famous professor.

How rapidly the new invention came into use is shown by the fact, vouched for by Mr. Green,* that by the beginning of the 16th century 10,000 editions of books and pamphlets had been issued, including the chief Latin authors, and that in the two succeeding decades all the notable Greek authors had also been printed. It needs but a brief consideration to see the bearing of this fact upon the multiplication of readers, and the great stimulus it must have given to education and to efforts to remove all needless hindrances from the path of knowledge by the improvement of methods of instruction.

But while the invention of printing in many ways removed a tremendous hindrance to the advancement of learning, there can be no doubt that the last fact stated by Guizot was the immediate cause of the remarkable intellectual movement which ushered in the Renaissance and the dawn of modern education. The

* Short History of the English People, C. VI., Sec. IV.

renewal of acquaintance with the ancient master-pieces of literary art, first gave to the new invention a worthy employment, while it stirred the souls of men by nobler objects than mere scholastic rubbish.

We have seen in a recent paragraph that during the Middle Ages the Eastern Empire played the humble but useful part of a conservator of the old Greek language and literature; and that it became a kind of enchanted castle in which great authors slept for long centuries, awaiting the touch of some magician's wand to summon them to renewed life, activity, and influence. The time for awakening came about the middle of the 14th century; and it was permitted to Petrarch and Boccacio first to reverse the wand, and to read backwards the entralling spell.

A learned but dirty, hideous, and withal fickle Greek scholar, Leo Pilatus by name, taught Greek to Boccacio and read Homer with him, thus inspiring him with a love for Greek literature. Some years earlier, another Greek scholar had undertaken the same office for Petrarch, but his sudden death had brought his lessons to an untimely end, so that later, in thanking a friend for a copy of Homer as an invaluable present, Petrarch said bitterly, "But alas! what shall I do now? To me Homer is dumb, or rather I am deaf for him." But though shut out from enjoying the great Greek authors, Petrarch realized their value; and moreover in his own field of learning, he did a great service in bringing to renewed notice the forgotten works of the great Romans. In

this last work, Dante likewise gave efficient aid. Thus this triad of famous Italians gave the first impulse to a better learning.

The enduring enthusiasm for Greek literature which made Italy the mother land of the Renaissance, dates, however, from the coming into Italy of Manuel Chrysoloras, a noble and learned Greek statesman, who was also versed in Latin. He lectured on Greek literature, at first in Florence, and then in Pavia, Venice, and Rome, arousing everywhere the deepest interest. He was followed later by many Greek emigrants who sought refuge in Italy from the terror of the conquering Turks, and who brought with them valuable manuscripts, spreading "the sense but not the spirit of the Greek classics." *

A taste for the collection of Greek manuscripts now sprang up, and the search for them was prosecuted with ardor not only by scholars, but also and at great expense by the Medici and by some of the popes. The enthusiasm for Greek literature centered especially in Florence, which became for Europe a seminary for Greek and Latin learning whence it spread to other countries,—Greek being introduced at Oxford near the close of the 15th century by Linacer and Groceyne.

During the 15th century, however, despite the growing enthusiasm, the sole work was merely preparative, to collect the new-found treasures, to comment on them, to imitate them,—in short to pave the way for

* See Gibbon's *Rome*, C. LXVI for an account of the classic revival.

really productive effort by thoroughly imbibing the antique spirit. A picture not more vivid than truthful, of the nature and direction of the intellectual life which animated Florence in this century, may be found in George Eliot's "Romola." It was a time of passage from the old to the new, lingering still in the old by its lack of intellectual freedom and initiative, yet looking forward ardently to the new era for which it was making the needful preparation.

The five facts that have just been presented together with their implications, may be regarded as the fore-runners of that extraordinary intellectual revolution which is called the Renaissance, and which may approximately be dated from the beginning of the 16th century. These were either its inciting causes or afforded to it favorable conditions ; while the existence, the favorite studies, and the methods of the older schools and universities reveal to us its most formidable future obstacles. With these facts clearly apprehended, we have gained the standpoint necessary for the consideration of the course and fortunes of modern education.

CHAPTER II.

THE RENAISSANCE, AND SOME INTERESTING PHASES OF EDUCATION IN THE SIXTEENTH CENTURY.

We have stated in the preceding chapter the most important antecedents of the Renaissance. Two other facts, however, claim our attention here, of which one coincided with the beginning of the Renaissance, and the other gained increased importance at about the same period. These are the great geographical discoveries which occurred at the end of the 15th century, and the literary growth of modern languages.

It can hardly be doubted that the discovery of a sea route to the East Indies around the Cape of Good Hope, and of that hitherto unknown continent, America, across the Atlantic, must have given a great new impulse to the minds of men, already predisposed by other causes to novel forms of activity. It not only enlarged their ideas of the globe which they inhabited, but also, by putting them in an attitude of eager expectancy as to the results of so great revelations, it must have been most unfavorable to submission to mere authoritative dicta. For geographic discovery is so closely allied to physical research, that it could hardly fail to incite men to a free investigation of the phenomena of nature, undeterred by the authority even of such names as Aristotle and Pliny, Strabo and Ptolemy.

Of even greater moment, both as a precursor and as an attendant of the great revival of learning, was the growing literary use and consequent settlement of form of the several great national languages of Europe. By the end of the 15th century the forms of these languages had become so far settled, that the writings of the 15th century present no considerable difficulties to students of the several tongues at the present day. The significance of this fact for the educational history of the Renaissance, lies in this, that however great may be the culture derived from the study of literature and science embodied in tongues like the Greek and Latin which are strange to the speech of the people, it can never penetrate to any considerable depth, nor exert any very perceptible influence on the vast masses of the people, until they have access to its sources in the familiar forms of their own vernacular.

It is true that at the beginning of the 16th century Latin was still almost exclusively used among the learned, and that creditable efforts were made to free it from mediæval corruptions; but parallel with this fact were works like those of Luther, of Rabelais, of Montaigne, of Thomas More, and many other authors, with vernacular translations of the Scriptures, which reached a vastly larger class of readers than the very learned,—a class, too, which as time passed was ever on the increase, and which has made its demands for the use of the vernacular in instruction ever more widely influential, until to-day the easy use of Latin is

confined to a meagre number of scholars, and the attempt to convey information by its means would be counted an anomaly, even in the Universities.

To the literary growth of modern languages and their wide use in schools of all classes may, without doubt, be ascribed the enormously greater, more pervasive, and more permanent effects which have followed in the train of the Great Renaissance, than any which were achieved by the springing up of the mediæval universities and schools, great though their significance was in the times when they appeared.

Such were the inciting and favoring causes of the revival of learning. At the outset it seemed destined to be only a classical revival, whose chief purposes were to be to restore the Latin tongue to somewhat of its early purity, and to bring again to the knowledge of the learned the literary treasures of antiquity. But deeper influences were at work, in the profound religious unrest which pervaded northern Europe,—an unrest which sprang in part from the often irreligious and even scandalous lives of the clergy, in part from the loosening of the hold on the consciences of men of ancient dogmas and superstitions. From this unrest, it came to pass that the intellectual uprising presently took a wider range than a mere acquaintance with classic authors, and imitation of their excellencies; and was correlated with a religious revolution, which gave an intense bitterness to its earlier struggles, but which ended in approximating its later efforts to that great Humani-

tarian ideal which had been enunciated by our Savior, but which had been wholly lost from view for more than ten centuries, the conception of the infinite worth and perfectibility of the human personality, the natural correlative of which is the need of education.

It is interesting to observe the different effects which the educational movement produced north and south of the Alps. In Italy, which was the cradle of the Renaissance, the religious ideas of the learned, both clergy and laity, reverted to infidelity and even to heathenism. Creeds and dogmas had so lost their hold upon the minds even of the clergy, that Luther tells us that on a visit to Rome, he heard some of the clergy boast that in celebrating the most sacred mystery of the Christian church, the consecration of the elements in the Eucharist, they secretly used words of most impious character. It is reported that Leo X. said to Cardinal Bembo, "Thou knowest how profitable to us has been this *fable* of Christ;" and it is unfortunate that the life of this enlightened prelate gives no contradiction to these words, which degraded the faith of which he was the head to the level of a heathen myth.

When such was the tone of the clergy, what wonder is it that among the laity, the rankest forms of irreligion prevailed. Vice and crime were never more prevalent. Savonarola in Florence thundered against the tendencies of the times, but his eloquent voice was soon silenced by the hands of the executioner. In the decades immediately preceding the Reformation,

several men succeeded each other on the papal throne, who were fair exponents of the character of the times. One of them was the father of a numerous brood of children ; another was the father of the infamous Borgias, of one of whom, Cæsar Borgia, it was said that he was “a connoisseur in crime”; still another connived at murders if he did not himself commit them ; of the most respectable of them, Leo X. in whose reign the religious outbreak began, and who was a man of elegant culture and a favorer of learning, Fra Paolo said that “he would have been a model pope had he had a more thorough knowledge of religious subjects, and more inclination to piety, but he had little of either.” To his court therefore resorted a flock of vices and shames which were welcomed if only they were amusing.

While such were the attendants in Italy of the revival of classic learning, north of the Alps, and especially among the nations of Germanic origin, a widely different tone of feeling prevailed. In England, John Colet, first as professor at Oxford, and later as dean of St. Paul’s, strove to make the knowledge of Greek a key to the New Testament, a basis for a “rational and practical religion,” freed from old superstitions and corruptions, and embodied in “simple forms of doctrine and confessions of faith.” In his efforts at reform within the church, he was supported by the most learned of the English prelates with the Primate, Warham, at their head.

The learned and brilliant Erasmus in the Nether-

lands,—if indeed he can be called a citizen of any particular country,—prepared an edition of the New Testament in which the “method of interpretation was based, not on received dogmas, but on the literal meaning of the text,” and “the actual teaching of Christ was made to supersede the mysterious dogmas of the older ecclesiastical teachings.” “As though Christ taught such subtleties,” says Erasmus, “subtleties that can scarcely be understood even by a few theologians,—or as though the strength of the Christian religion consists in man’s ignorance of it”! This edition of the New Testament, however, in which Erasmus boldly expressed the wish, heretofore considered well-nigh heretical, that the gospels and epistles “were translated into all languages, so as to be read and understood not only by Scots and Irishmen, but even by Saracens and Turks,” was approved by Archbishop Warham and sent “to bishop after bishop.”

In Germany the learned Hebraist, Johann Reuchlin, strove by his labors on a Hebrew Grammar and Lexicon, to make the Hebrew scriptures accessible in their original sources; and by his opposition to the burning of Jewish books save those that directly attacked Christianity, he gave the occasion for the bitter contest with the Dominicans of Cologne and one Pfferkorn, a converted Jew, in which appeared the famous “Epistles of Obscure Men.” In these epistles, the monks and the scholastics with their barbarous Latin were treated with biting irony, and their ignorance and their scandalous lives were cruelly re-

vealed to the public gaze, and made subjects of ridicule.

I omit to speak, even in this brief way, of the services of Rodolph Agricola in Germany, and Alex. Hegius of Deventer,—the latter a teacher of Erasmus,—who by the sobriety of their minds, and the practical direction of their efforts, in the last part of the 15th century, showed what should be the character that the Renaissance would assume in Germany.

It should be borne in mind that all this precedes the great religious revolution in Germany and England, and that all these men were faithful sons of the church, anxious chiefly for reform within the church, and for placing her doctrines and her practice, on a more scholarly as well as more religious basis. Of all these men, we shall have future occasion to meet again Erasmus only, when we shall consider more at large his eminent services to the cause of better education.

From what has now been said, it will be seen how different was the early course of the Renaissance in Italy and in northern Europe. I have adopted this course also, that I might without undue prolixity, indicate its history and its tendencies, before it became merged in the great religious uprising in which Luther became the central figure. Naturally we are here concerned with the religious reformation only in so far as it is related to the course and history of education.

I think it may promote clearness of comprehension with regard to the history of education in the 16th

century to state distinctly at the outset what seem to me its most marked characteristics. These were,—1, the determination of educational practice, and range of studies to the classic languages, to which Greek was added and to some extent Hebrew: 2, the great extension of middle class education, by the establishment of new Grammar schools in England, by the origin in Germany of many Protestant high schools, and by the rise and spread of the Jesuit schools; 3, that education begins to be considered as a preparation for real life, and hence some efforts are made to economize the time of pupils by the use of better methods of instruction and of more intelligible text-books; 4, that in more than one quarter we find expressed the idea of free, universal, and compulsory education as the proper corollary of Christian freedom of thought; 5, that for the first time in many centuries, we have great educational theories announced, and reforms proposed; and 6, that we see springing up great practical teachers from whose example we may learn something worth noting. We will discuss these several topics in their order.

1. We have said that the Renaissance had at the outset the character of a classic revival. In full harmony with this character was the almost exclusive determination of the studies in the schools and universities to the Greek and Latin classics, so soon as they came under the influence of the new spirit. This direction of the activity of the schools long remained the dominant one. The Latin classics and elegance in

the use of the Latin tongue, naturally received the larger share of attention; but Greek likewise gradually assumed a good degree of prominence in many schools, Hebrew also receiving some attention. We have already seen that the study of Greek and Hebrew was urged by men like Erasmus and Reuchlin as a means for gaining a reliable knowledge of Holy Writ and so of freeing religion from errors and superstitions. It may readily be judged that the adherents of the Reformation would be little likely to overlook this object in the schools which they founded.

It should not be supposed however that so great a change in the subject-matter of studies as the substitution of the Latin and Greek classics for the mediæval authorities, and for empty scholastic disputation, was effected without a bitter struggle. In point of fact the struggle was both protracted and virulent in the ancient universities and secondary schools; and this was particularly true of those of Germany. There the Catholic clergy in charge of many of the schools, with the Dominicans who were partisans of scholasticism at their head, and even not a few Protestants who clung to the authority of Aristotle, made long and vigorous opposition to any innovation in that to which they were accustomed. It was in the early days of this contest that the “Epistles of Obscure Men” to which allusion has before been made, were written by the Humanists; yet as late as 1570 we read in the life of Pierre Ramus that this famous scholar was refused temporary admission into the

teaching force of the Protestant gymnasium of Strasburg because he was known to be opposed to Aristotle's logic; and that on this same account, the University of Heidelberg strongly opposed his temporary appointment as professor of ethics in that institution, when made by the elector palatine.

In spite of all opposition however, Humanistic studies steadily made their way into the old strongholds of Scholasticism; the newly established Protestant schools and universities were in a modified sense humanistic from the outset; and, following upon the success of this revolution in studies, the Burse system in the German universities died out, the lower degrees B. A. and A. M. fell into disuse; and the preparatory schools of the liberal arts were separated from the universities as *gymnasien*.*

In English Oxford as well as on the continent, we are told by Green, that the Renaissance met with a fierce, though short-lived opposition. "The contest took the form of boyish frays, in which the young partisans and opponents of the New Learning took sides as Greeks and Trojans." One of the college preachers who had made furious tirades from the pulpit against the new studies, was summoned before the king, Henry VIII, where he alleged that he was carried away by the spirit. "Yes," retorted the king, "by the spirit not of wisdom but of folly." The

* See Schmidt II. 377-9 for account of the opposition of old universities to Humanism, and the changes in them which resulted from its success. Also Paulsen, *Gesch. des Gelehrten Unterrichts* for a view more favorable to the universities, and less favorable to the tact of Humanists.

bluff king was favorable to the New Learning, and was not disposed to permit any nonsense to hinder it ; his minister Wolsey founded a splendid college as its nursery ; and Oxford soon became, what it has since remained, a stronghold of Humanistic learning.

Elsewhere, the struggle lasted fully a century—so tenacious of life are old ways—but when it ended, the New Learning was everywhere in possession of the schools, though in not a few, disputations continued to hold their place.

2. A second characteristic of the 16th century was the great extension of middle-class education in England and elsewhere. And truly this extension is something remarkable if it bears any due proportion to the multiplication of grammar schools during this century. Thirty of these schools existed in England before 1500, and in the half century which followed, the number was nearly trebled, fifty-four new ones being added. Harrison, an Englishman, in 1577 writes thus of them : “ Besides these universities, also there are a great number of Grammer Schooles, throughout the realme, and those verie liberallie endued for the better relief of pore scholers, so that there are not manie corporate townes, now under the queene’s dominion that have not one Gramer Schole at the least, with a sufficient living for a master and usher appointed to the same. There are in like manner, divers collegiat churches, as Windsor, Winchester, Eaton, Westminster ; and in those a great number of pore scholers, dailie maintained by the liberality of the founders, with

meat, bookees, and apparell ; from whence, after they have been well entered in the knowledge of the Latine and Greek tonges, and rules of versifying, the triall whereof is made by certain apposers, yearlie appointed to examine them, they are sent to certain especiall houses in each universitie &c.” This quotation from a contemporary writer is the more interesting, because, while showing the great extension of secondary schools, it indicates also how thoroughly the New Learning had taken possession of them.

A letter written to Dean Colet about the beginning of the century, by one of his friends, is supposed to indicate tolerably well the feelings of the gentry about learning at that time. It represents a gentleman at a dinner where learning was spoken of with some favor, as bursting out in this fashion : “ Why do you talk nonsense, friend ? A curse on those stupid letters ! all learned men are beggars : even Erasmus, the most learned of all, is a beggar as I hear.—I swear — — I’d rather that my son should hang than study letters. For it becomes the sons of gentlemen to blow the horn nicely, to hunt skilfully, and elegantly to carry and train a hawk. But the study of letters should be left to the sons of rustics.” A great change was evidently wrought in the opinions of this class during this century ; and this change was doubtless due to the better adaptation of studies to fit men to make a decent figure in the kind of life which they were destined to lead.

We should not fail to observe that amongst the

grammar schools founded in England in the first half of this century, was the one founded by Dean Colet in connection with St. Paul's, of which Lily, long famous among English schoolmasters, was the head, and which had over its gate a figure of the child Christ, with the legend "Hear ye him," so indicative of the pious spirit of its founder. He died in 1519, but not before he had strongly urged in a sermon preached before the clerical convocation, that a reform in the church should begin with the chief clergy.*

Even more marked than the growth of the middle class schools in England, was the growth of schools of a like kind in Germany. Such, for example, were the "Particular" schools and Kloster schools of Württemberg and Saxony, the latter of which were founded with the estates and revenues of defunct monasteries, and both organized in six progressive classes. Such were the Princes' schools (*Fürstenschulen*) of Saxony with their courses of six years, beginning with the end of the third year of the other two schools. Such was the widely celebrated school of Sturm at Strasburg, and those somewhat less known of Trotzendorf, Michael Neander, and Hieronymus Wolf. Such also were the justly celebrated schools of the Jesuits, which sprang up and rapidly multiplied in France as well as Germany, in the last half of the 16th century.

In all of these secondary schools there was much

* Burnet, Hist. of Ref. III. p. 39. The quotations are from "Education in Early England," a publication of the Early English Text Soc.

which had a common character. In all, Latin predominated with some Greek; little or no attention was given to mathematics; and, save a few not very conspicuous instances, there was an apparent neglect of history, geography, and natural history. Von Raumler warns us, however, not too hastily to suppose that geography and history were entirely neglected because they are not mentioned in the list of studies, since very possibly they may have been used as incidental to the explanation of classical authors, as we know that they were used in this way in the schools of the Jesuits.

During this century, the idea of providing free board and tuition for poor but talented youth, was widely acted upon in German secondary schools and also in the universities. The free places needed for this purpose, were endowed from the confiscated wealth of the monasteries; and many cloisters were converted into schools which were endowed from their possessions. A policy of this kind had early been hinted at by Luther, and the state now undertook to use the property of the monasteries for the advancement of learning, which had nominally, at least, been their most useful purpose.*

What has been said will suffice to show how wide an extension was given during this century to secondary education in some of the states of Europe. It may not be out of place to remark in this connection that provision for popular elementary education was

* See Paulsen *Geschichte des Gelehrten Unterrichts*, p. 160, etc.

not wholly neglected, at least in Germany. The school ordinance of Wirtemberg dating from 1559, provides for the instruction of boys and girls in separate schools, in reading, writing, religion, and church song. The similar school laws of Saxony which date from 1580 provide among other things for "Deutschen schulen in which reading, writing, and religion are the subjects of instruction." Considerably earlier in the century, similar provisions for a like limited instruction, were made in many of the cities and small states of northern Germany, and in some of them separate schools for girls are mentioned.*

3. We have now discussed two of the marked characteristics of educational history in the 16th century, viz. the determination of educational practice and range of studies to the Latin and Greek classics, with the resistance offered by the older universities and secondary schools to this Humanistic revolution; and the great extension of secondary education in England and Germany, and to some extent, through the Jesuits, in France. Let us now consider the third fact which seems to me to place a somewhat distinctive mark upon this century, and this is that school training seems to have been regarded more fully as a preparation for the successful pursuit of the interests of this present life, than had ever been the case since the fall of the Roman Empire; and that hence some intelligent efforts become apparent to economize the

† Dittes-Geschichte der Erziehung und des Unterrichts § 27.

time of the pupils, and to make a proper use of their intellectual activity.

Even if we put entirely out of view those hindrances to economy of time and effort, that we have heretofore considered as existing in the Middle Ages ;—it is evident that the view of life and its purposes which prevailed in those ages, a view which made of ascetic observances the greatest merit, and of an utter renunciation of this world with all its interests and enjoyments the surest passport to eternal blessedness, was very little fitted to encourage any possible saving of time which was considered of little worth, and of energies which men were taught to think wasted unless directed to a contemplation of the great hereafter. It is true that the church by its eager grasping after worldly power and emoluments, and that many of the clergy in later ages by their greedy pursuit of earthly possessions and sensual pleasures, tacitly denied as *men* the doctrines which as churchmen they taught ; but the mass of men are slow in their logical processes, and so for a time the relations of the objective examples to the subjective dogmas passed unchallenged, or were speciously explained away.

But with this new intellectual awakening, men began to reason justly that what both church and churchmen found so interesting in this present world, must certainly be worthy of some attention ;—that this life, though it be but a period of probation for a far more glorious hereafter, is capable of being so wisely used and so rationally enjoyed as to become a profit-

ble abiding place for those who are heirs of immortality; and that hence youthful years and youthful energies are too precious to be wasted and frittered away unnecessarily. Hence we hear from more than one quarter, complaints of the loss of pupils' time.

Erasmus inveighs against the time that is wasted in teaching children to read and write, which he says ordinary masters spend *three years and more* in doing; and he sets himself, as Quintilian had done more than fourteen centuries earlier, to devising means for utilizing youthful curiosity, memory, and readiness to observe. Luther bitterly denounces the old system by which he says, "we have seen young people study twenty years by the antique methods, and come with difficulty to stammer a little Latin without knowing besides anything of their mother tongue." The enormous waste of time in the education of children is one of the things that Rabelais most bitingly satirizes in his grotesque account of the early education of Gargantua and in contrasting it with the training of Eudemon. It is needless to go farther in illustration of the awakening consciousness that the years of childhood have been hitherto terribly wasted, and that it is needful henceforth that they be used to better purpose in a better preparation for the business of this present world.

Should it be thought strange that with this lively and newly-aroused interest in the preparation of youth for careers of future usefulness, such well-nigh exclusive attention should have been given to the ancient

languages in all save the most elementary schools, we shall do well to consider that at that time these were by far the fittest and most perfect means available for youthful training ; that Latin was still, not only the universal language of the learned, but that it was, and long continued to be, the sole medium through which desirable knowledge could be gained ; that those sciences on which so much stress is now wont to be laid as a preparation for practical life, were then in so infantile a state as to be rather a source of misinformation than of reliable knowledge ; and that furthermore, it is a question not yet definitely settled, among some most enlightened nations, appealing to facts in their own history, whether such study of languages and their polite literature, is not after all the most effective training for practical life.

Aside from this matter of the choice of the best literary means available for the training of youth, the expedients that were in this age proposed by thoughtful men to economize the time and powers of the young, were chiefly these three, viz., a larger use and more thorough cultivation of the vernacular tongues, the employment of better and more intelligent methods in instruction, and the preparation and use of more systematic and intelligibly-worded text-books. It will readily be recognized that all these means were suitable for the end proposed, and were likely to be efficient thereto if wisely and skillfully used. We shall be able to examine them all in some detail, when we come to consider the theories of education to which

this century gave rise, under the fifth topic which we have proposed to ourselves.

We may content ourselves with remarking here, that the need of more suitable school-books was felt to be so imperative, to obviate the waste of time, that in Germany the greatest geniuses like Reuchlin and Melanchthon, thought it not beneath them to compose elementary treatises for schools; that the art of printing was there used most of all to multiply better school-books; and that the greatest prodigy of learning, as well as the keenest intellect of the sixteenth century, Erasmus, composed grammars to supersede books like Priscian and the barbarous *Doctrinale*, and prepared editions of classic authors, as well as selections, which were more suitable for school use, as will be shown hereafter.

4. In this century the idea of universal, and even *compulsory* state education, which had been forcibly expressed by Plato, had been practiced by the Spartans and probably by the Jews, and possibly had been conceived as desirable by Theodulf in the days of Charlemagne,—we find expressed in at least three widely different quarters, by Luther in 1524 and 1530, by Sadolet, archbishop of Carpentras in 1533, and by the nobility in the States General at Orleans in 1560.

In his celebrated letter to the “Magistrates of All Cities of Germany,”* Luther insists that the care of education should be an affair of state, and not be left solely to parents, of whom some are careless and

* *Luther als Pädagog*, pp. 86-106.

"like ostriches which abandon their eggs, give life to children and leave their nurture to chance," still more are ignorant of anything save care for daily bread, and finally others who would gladly care for their children have neither time nor place for it. Yet the children when grown up, he says, will be our fellow citizens for weal or wo. If for weal, the state must care for their education, for "to them is the welfare of the state entrusted;" and this welfare does not depend alone on its treasures, its beautiful buildings, and its military equipment, but upon its having many learned, reasonable, and honorable citizens who know how to make good use of such things. It is Satan, he declares, who suggests to men the neglect of the education of children. And then, enumerating various public purposes for which governments freely expend money, as armaments, roads, and bridges, he exclaims, "Why should we not with better reason spend at least as much for the poor needy youth, to employ a skillful man or two as schoolmasters?"

More than once he asks in substance the bitter question,—do we Germans then wish always to remain boobies and beasts, as our neighbors call us, and with good reason?—that he may sting the national pride, and rouse to effective action in founding schools to remove the reproach of ignorance and stupidity. "I demand," he says, "that the child go to school at least an hour or two per day; and it is expedient to select the most capable among them as masters of schools. Long enough we have wallowed in ignorance and cor-

ruption. Long enough and too long, we have been the stupid Germans; it is time that we go to work." So much on the right and duty of the state to give universal education to its people, I extract from Luther's vigorous plea, and much more is equally pertinent.

As to its nature, while making a strong plea for the ancient languages, he says, " You understand it; we need in all places schools for our daughters and our sons, that the man may become fitted to exercise his calling properly, and the woman, to direct her household aright and bring up her children like Christians."

Let us now see on what he bases his argument for *compulsory* education. He says, " my opinion is, the authorities are bound to *force* their subjects to send their children to school. If they can oblige their subjects to carry spears and guns, to mount ramparts, and to do all military duties, with better reason can and ought they to *force* them to send their children to school, since here the question is of a much more terrible war against the demon Satan."* You will observe that he rests the right of the state to compel school attendance on the same basis as the conceded right of governments to compel their subjects to do military duty, and on the fact that the moral welfare of many children is imperilled by the ignorance or carelessness of parents. Luther certainly leaves us in no doubt of his opinion in the matter which we are considering.

* Sermon to Pastors in 1530.

Archbishop Sadolet, a friend of Erasmus, and founder of several schools for children in his diocese, wrote a "treatise concerning the right instruction of free-born children" in which, besides some excellent counsels in other respects, he recommends that states should copy the Greeks in not leaving the training of children to parental caprice or ignorance, and says "as the fathers are usually blind, the *laws* should interpose to enlighten them, to direct their good-will, or in case of resistance to constrain them." We need not look too closely to the good prelate's Grecian example, unless he refers to Sparta. His opinion is plain in respect to the right and duty of the state to establish schools and enforce attendance on them.

At the meeting of the States General of Orleans in 1560, the memorial of the nobility to the King contains the following remarkable proposal: "May it please the king to levy a contribution on ecclesiastical benefices for the payment of a reasonable salary to school-masters and men of learning in all cities and villages, for the instruction of poor youth of the rural parts; and to order that the fathers and mothers be bound to send the said children to school on penalty of a fine, and that they be *obliged* to do this by the lords and the ordinary judges." There is no question that this is a proposition for general and compulsory education, and that it provides what seem likely to be adequate means for the enforcement of compulsion.

It is also obvious that the nobles point out an adequate source for the revenues needed to support such

schools,—from the property of other people, with which men are wont to be somewhat more generous than with their own. Prof. Compayre explains the disposition of the nobility to petition for popular instruction as Luther had done, and their readiness to levy contributions on the ecclesiastical benefices for that purpose, as Luther had also suggested, by saying that a majority of the French aristocracy in the 16th century were imbued with the spirit of the reformation and favorable to the Protestant cause.*

It is quite possible that what may seem to us a proposition for unwarranted spoliation for an object worthy in itself, would have been excused by those who participated in it, by pointing to the vast wealth accumulated in the ecclesiastical benefices, a wealth needless for the legitimate objects of the church and liable to be squandered in luxury; and by recalling the objects which had given color to at least a portion of these accumulations, viz., aid to the poor, and gratuitous education as it had been given in most of the early monasteries. It might have been urged plausibly that the nobility purposed only to restore a portion of this wealth to its original uses.

We have then three distinct proposals in this century for universal education, under direction of the state, and compulsory in its character. One of these proposals comes from the leading figure of the Reformation, a second from a prelate of the Roman church, and a third from a body of the French nobility. Evi-

* Hist. Crit. des Doc. de l'Edn. en France, vol. I, p. 59.

dently therefore, thus early in the Renaissance period, a perception of these great educational principles, which the present age is coming to regard as well-nigh axiomatic, had already gained a degree of acceptance in theory which seems more remarkable when we consider how slowly they have been accepted in practice.

In concluding this part of our subject, it is interesting also to remark, that the arguments with which Luther especially in general, and Sadolet in part, enforce their ideas, are the same that are urged in our own days for like purposes : viz., the need of universal enlightenment as the logical correlative of that universal freedom of thought which is the essence of the Humanitarian revolution ; and the right and duty of the state to supervise it, enforce it, and insure it against the chances of parental poverty, ignorance, and caprice, in the interest of the entire body of citizens.

CHAPTER III.

EDUCATIONAL OPINIONS OF THE SIXTEENTH CENTURY.

5. The appearance in the sixteenth century of a number of distinguished men who have expressed noteworthy opinions on the means and method of education, is one of its most interesting characteristics; not only because these men furnish valuable contributions to the history of educational thought, but also because they indicate how thoroughly the human mind has been awakened, and how completely it has freed itself from the shackles of authority in the realm of thought. For nearly twelve centuries, from the days of Quintilian and Plutarch, of St. Jerome * and St. Augustine, little or nothing bearing the stamp of original thought on the subject of education is known to us. Here, as elsewhere during the Middle Ages, authority reigned supreme, an authority too, which barren and ascetic in its nature, brought barrenness into education so long as it prevailed.

But from the beginning of the 16th century all this is changed. From this time forward we shall find no lack of men of the brightest genius, who bestow on educational topics some of the choicest efforts of their

* St. Jerome's letter to Laeta, written in the fourth century, in which he gives advice to a Christian mother for the education of her daughter, a descendant of the Scipios and Gracchi, and which was long influential in female education, may be found in Barnard's American Journal of Education, vol. 5, p. 549.

thought. Nor will these men be confined, by any means, to the adherents of the reformation. Indeed four of the six men whose opinions we shall have occasion to discuss in this century were Catholics, and one of them, Rabelais, was a monk, though not very ascetic in either life or writings. Thus it will appear that freedom of thought has penetrated everywhere in the track of the Renaissance, and displays itself, as in other ways, so also in zeal for the improvement of education.

It will be well for us to carry with us as a kind of guiding thought in examining the ideas of the writers of this age, the fact that both the fundamental principles of right education, were now almost everywhere violated, as an inheritance from the past ; to wit, the principle of Conformity to Culture in selecting the best available means, and the principle of Conformity to Nature in the adaptation of methods and instrumentalities in instruction to the end to be gained in the development of the young. The theories of this and the succeeding ages, may be regarded as efforts to rehabilitate both these principles in educational practice.

Against scholasticism, which violated the first, sanctified as it was by tradition and entrenched in the inertia of men, a sharp but decisive battle was waged which continued most of this century. We shall see this in the denunciations of Luther, in the keen and polished invective of Erasmus, in the grotesque delineations of Rabelais, and in the efforts of all to give to

classic literature its due preponderance in the courses of the schools; whilst the efforts of Ramus in behalf of Mathematics, and of Montaigne in favor of History, are parts of this same struggle to secure a proper conformity of studies to the best available means of culture.

The efforts which are made by all the theorists to secure conformity to nature in the methods of imparting instruction to the young, are of the highest interest, because they are the efforts of pioneers in an almost untrodden field. They will be seen, not only in the proposal of methods seemingly better adapted to the ways in which the youthful intelligence works its way to clearness of view, but also in the preparation of school-books better suited to the capacity of young minds. And should some of the expedients that are proposed seem to us like the half-blind gropings of men after better things, yet measurably uncertain as to how they may best be attained, we shall do well to remember, that at that time the laws of mental evolution had been very little studied, and that with the experience of nearly four centuries of theories to aid in their mastery, we of the 19th century cannot boast that we have gotten wholly back to nature in our school practice.

Martin Luther, 1483-1546.

Luther is so well known to all of us as to need no personal introduction, and we have already seen his testimony as to the inefficiency of studies in causing

waste of time, and his appeals for universal and compulsory education. He expresses his opinion of the merits of the existing schools with his usual frankness, in calling them “these stables of two-footed asses, and these diabolic schools” which he would wish razed to the ground or else by a pious metamorphosis transformed into Christian schools. The masters he depicts as men who themselves ignorant, were unable to teach others either truth or piety, much more, incapable of instructing themselves or others in life and the principles of reason ; and he asks “Whence then comes the evil ? From this,—that they had for all books only those of ignorant monks and barbarous sophists. They were therefore forced to become what the books were whence they had learned, that is perfect ignoramus. A daw does not hatch a dove, nor does a dullard train a prudent man.” It will be seen that he is perfectly frank, in denouncing the lack of conformity to culture.

Let us see what means he proposes to remedy the evils that he exposes. These were first the classic languages and some other studies which he shall presently name himself, and second, great libraries in centres of population. (1) As to the first he says, the first thing we have to do is to cultivate the languages, Latin, Greek and Hebrew ; “for the tongues are the sheaths which contain the spirit, the vases which hold religious verities ”; and again in another place, “ If I had children and the means to rear them (this was said before his marriage to the nun, Catharine von

Bora), I should wish them to learn, not only languages and History, but also Music and Mathematics." We see that in this, Luther would make an important addition to the studies to which that age predominantly turned, since he would add mathematics, history, and music to their curriculum. Still farther, in his letters and sermons, he lays the strongest emphasis on Religion as a subject of youthful study, and he shows himself friendly to physical education through a training that may fit boys for military duties. Hence his curriculum of school studies will come to include religion, the learned languages, history, mathematics, singing, and physical training.

In one of his sermons he also presses parents not to be easily satisfied with small advancement of their children. "Let thy son study boldly," he says, "even though he should sometime want bread; so wilt thou give to our Lord God a fine bit of wood out of which He may carve a master. And think not within thyself that now the common love of bread and butter so greatly despises the professions, and so say—'Ha, if my son can read and write German, and can reckon, he knows quite enough, I will make him a tradesman.' They shall soon become so eager that they will willingly dig a learned man out of the earth with their fingers. if he lay ten ells deep."

We should not think however that Luther pushes his dislike to the old scholastic ways so far as to despise Dialectics and Rhetoric. On the contrary, he values them both truly, for what they are really fit,

He says in his table talks, "Dialectics is a useful and needful art, which one should study and learn rightly, as he would arithmetic and reckoning. Dialectics reasons, but gives not the ability to him who has already learned it, to reason about everything : it is an *implement* and *tool*, by whose use we can reason elegantly, correctly and systematically about what we *know* and *understand*." So also of Rhetoric, he says— "Fine speaking is not a strained and high-colored gloss of words, but is rather an elegantly adorned speech, which presents a matter or a subject with charming skill, clearly and nobly, like a beautiful painting." Both these arts are, it will be seen, treated fairly and with just discrimination, as would appear even more plainly could we carry quotation farther.

(2) Besides studies which we have considered, Luther would extend farther the means of culture, by the establishment in all cities of extensive libraries, in which he says, "the first place should be for Annals, Chronicles, and Histories of all kinds which perpetuate the remembrance of past times. For these are wonderfully useful for learning and regulating the course of the world, yea even to behold the wonders and the works of God." I choose this passage from his wise advice as to the contents of such libraries, because it shows that his mention of history among the subjects he would have taught to children, was one of his settled convictions in regard to school subjects, at a time when history was still little thought of. His list of books that should be excluded, which he classes as

eselsmist, is at least amusing, as showing his disgust for scholastic theology.

In regard to home and school discipline he speaks much and wisely, recommending a gentle firmness which shall assure obedience, yet win love. The life of the school should be social as opposed to monastic restrictions and severity. He recommends also that languages should so far as possible be learned concretely rather than by abstract grammar rules as heretofore. Hence we may see that Luther enters little upon conformity to nature. His effort, aside from religion, was for conformity to culture.

Erasmus, 1467-1536.

Erasmus, the most famous scholar of the sixteenth century, was born out of wedlock at Rotterdam, probably in 1467, and at the age of twelve was sent to Deventer, where under the learned Hegius, he studied the Latin classics with such ardor as to commit to memory Virgil, Horace and Terence, besides learning a little Greek. Both his parents dying when he was not yet fourteen, he was left in the hands of guardians who desired to make him a monk that they might share his small patrimony. The boy made a stout resistance, but finally took the vows, lured by the prospect of a chance for quiet study for which he had a strong taste. Later he was ordained to the priesthood, but led a somewhat wandering life, visiting many cities where the rising fame of his great learning won him many friends.

He mastered Greek by his own unaided efforts, for which language he had so eager a desire that he said “when I get money I will first buy Greek books, and then clothing.” He became especially famous for his pure and elegant Latin ; for his keen critical acumen and literary taste ; for his sharp and witty criticisms both of scholasticism and of those who imitated Cicero *in form* but not in substance ; and for his bitter hatred of the monks, whose cheated victim he had been, whose life he had for five years shared, and from whose vows he had been freed by the pope.

He prepared a fine edition of the New Testament, some passages from the introduction to which have been already quoted, and which is said to have been an influential factor in the Reformation ; yet he had little sympathy with Luther, refused his support to the Reformation, and acknowledged that he had no taste for martyrdom. He prepared the materials for improving classic scholarship, by good editions of authors, by simplified Grammars, by translations of Greek authors into Latin that they might be made more generally accessible, and by his collection of 4200 Adages with their exemplification, exposition, and illustration. He was also author of other works of which his Colloquies are the most famous.

He gained the reputation of being the most profound scholar and the keenest satirical genius of his time, and at the outbreak of the religious reformation, his position in the world of letters was an imperial one. He was sought after by many universities ; literary

aspirants laid their productions at his feet, as the supreme arbiter of reputations; and his word was the law of all Humanists. But he was a man of peace, and believed that the reforms which he desired in letters and religion could be peacefully brought about within the ancient church. Hence he was little fitted for the troubled times in which his last years were passed. His influence declined, and he sank into a comparative neglect which was little to his taste. He died at Basel in 1536, a man who had long been without a country, and who declared indeed that "those initiated to the worship of the muses have all the same fatherland."

(1) While Erasmus labored effectively for both branches of that educational reform which this age needed, his services in promoting conformity to culture were peculiarly great. From his reputation for vast learning, from his mastery of all the resources of language and style, from his critical skill and his command of argumentative sarcasm, he was specially equipped to enter effectively into the two-fold contest that had now to be waged. On the one hand he fought against Scholasticism which was entrenched in many of the universities and secondary schools, and which he strove to overthrow, not only by revealing its absurdities, but also, with the true spirit of constructive criticism, by substituting the polite literature of antiquity in instruction, in place of the bald epitomes, and barbarous and tasteless crudities, which were all that scholasticism had to offer. On the other

hand, he contended against the empty imitations of the hypercritical Ciceronians, who had mistaken the *form* of antiquity for its essential *spirit*, and who compassed heaven and earth to collect and use the very words and forms of expression of Cicero, forgetting that Cicero had used language as a vehicle for the *ideas* which were current in his time, and which therefore differed in many essential respects from those which were of interest to men living nearly sixteen centuries later.

Into this double crusade he entered as a kind of free lance, with all the energy of his peculiar character ; and, by his witty polemic, by his critical editions of authors, by his translation of Greek works into the better-understood Latin, and by his simplification of Grammars and Lexicons, he did more than any other man of his age to promote the triumph of the classic revival.

It is to be observed that his preoccupation is wholly with literature, with grammar as an *implement*, and with exposition of Greek and Latin literature as the best available *means* of intellectual culture. He would have these mastered by the memory, indeed ; but he differs vitally from the spirit that he criticizes, in the emphasis which he lays, on the necessity of freedom of thought and of deep meditation by the pupil on what he learns, and on the need of training youth to early self-direction and self-activity.

He not only desired that the avenues to the things then most worthy of being known, should be laid open ;

but, unlike some of his contemporaries, he would open them freely to the greatest number possible, to *women* as well as to men. To this end were intended his Greek translations and his collection of illustrated *Adages*, as well as his already-quoted desire that the Scriptures should be made accessible to all in their vernacular speech. He vigorously denounces the thoughtlessness of parents who neglect the education of their children, while laboring diligently to win fortunes for them. "What profit," he exclaims, "or what honor will so much wealth bring to them, if they know not how to use it!—If he for whom you amass this fortune has been well trained, this is an instrument which you furnish for his virtues; but if his spirit is untutored and gross, what have you done but to furnish him means to do ill and to be criminal?"

Finally Erasmus did an important service, for promoting the triumph of the best means of culture over ancient prejudice, by reconciling profane letters with the genuine spirit of Christianity, its Humanitarian spirit. In that age, even more than in most ages in which knowledge and science are making rapid advances, it was needful to overcome the scruples of a great number of timid souls who feared what might be the results of any innovation in the means of culture, on the Christian faith. Such men are met with in all periods, men who seem to fear that truth, and especially Christian truth, is of so fragile materials as to be unable to endure the contact of new ideas. They were especially numerous in the 16th century;

and by silencing and dispelling their fears, through the demonstration that what is really vital in Christianity has nothing to fear from any good literature or useful science, Erasmus did much to aid the success of the New Learning, and “to render fruitful that meeting of the antique and the Christian spirit from which sprung our modern civilization.”*

Let us now see what Erasmus proposes, to improve the methods of education and to bring them into a closer conformity with nature.

(a) He urges strongly, like Quintilian, the judicious utilization of childhood, when memory is most plastic and impressions most indelible, and when the child may learn most readily the germs of many things which are highly useful in mature life. Thus, he thinks, those more mature years may be economized, whilst the child may be guarded from vices into which his innate activity, if not wisely directed, might lead him. Hence he combats as false the idea that children should do no study until they are seven years of age; yet care should be taken, he thinks, that they be not overtasked, and that whatever they learn should be so kindly presented as to be a pleasure. He would have especial care given during these early years to *morals* and *manners*, and to acquiring a pure and choice *use of language*, to a lack of which he rightly attributes many later defects in judgment and in ability to acquire the sciences. Now, putting aside the idea of *study* which Erasmus evidently desires to im-

* Feugere Vie d'Erasme, p. 454.

press, all this is applicable to Kindergarten efforts, and clearly expresses much of their substance and spirit.

(b) Again, he insists that all the efforts demanded of children should be carefully graduated and adapted to their powers ; and that they should be made as far as possible attractive, yet without neglecting the essential difference of *work* and *play*. See how he presents this idea : “ In like manner as the body in early years is nourished by small portions given at intervals, so the mind of the child should be nourished with knowledge *adapted to his weakness*, and presented little by little in an attractive manner. Thus he prepares himself for more serious tasks, while being sensible of no fatigue ; for the continued and kindly presented effort, while costing much less, assures progress and gives finally the same results. But there are people who wish that children become men in a day : they take no account of age, and measure the strength of those tender minds by their own. From the first, they press them with rigour, expect everything from them, frown if the child does not answer their expectations, and are excited as if they had to do with men, forgetting doubtless that they were once children themselves.” To such unreasonable teachers he addresses the admonition of Pliny,—“ Remember that this is a child, and that thou once wast one.” Here we have clearly and forcibly expressed the idea which has occupied a large share of the attention of wise schoolmen in our own times, the due gradation of studies and their adaptation to the capabilities of the growing mind.

(c) The protest of Erasmus against the brutality of discipline, then everywhere prevalent, as defeating its own ends, has already been mentioned.

(d) Let us finally observe what he proposes to render the acquisition of knowledge easy and agreeable. It will be noted here that he advises objective methods for teaching reading, which he complains that teachers take three or more years in doing. The expedient of using letters cut from ivory was doubtless suggested by Quintilian; but to this he adds others which appeal to well-known inclinations of childhood, such as making letters from dainties and permitting the child who names them rightly to eat them, or giving a prize to the one who is most successful in shooting the letters with arrows, and naming them rightly when hit. It is significant also that in criticising some current method of teaching the alphabet, he objects to it on the ground that it is an attempt to *teach the unknown by that which is still less known*.

His chief interest is turned, as has been said, to the study of languages; but in this, while agreeing "that the elements of grammar are at the outset very dry, and more necessary than agreeable," he suggests that the skill of the teacher should here spare the child a good part of repulsive labor, especially by limiting acquisition to what is simplest and most needful; and he derides the needless complications and difficulties with which the brain of the child is puzzled, by having subjects presented prematurely or in bad form or of a wholly useless character. Declaring that the

study of *things* is more profitable than that of *words*, he gives some place to History, Geography and Natural History, but only as auxiliaries to literature, that it may be the better understood. He also proposes for pupils, exercises in composition based on subjects borrowed from real life and from the child's own experience; and though some of the subjects named by his biographer Fengère, argue a curious idea of the experience of children, the *idea* is none the less good, because of its imperfect execution.

Finally he proposes to make the mastery of Greek and Latin literature easier and more agreeable, by arranging the authors, both poetic and prose, in the order of the relative difficulty which they will be likely to present to learners. His arrangement does not entirely agree with modern practice; but this consummate scholar had certainly earned the right to have an opinion in a matter of this kind; and his attempt was certainly also a noteworthy one in an age when such questions as proportioning the difficulties of subjects to the capacity and stage of advancement of pupils, had not yet been counted worthy of the attention of scholars.*

Giovanno Ludovico Vives, 1492-1540.

Vives, born 1492 at Valencia in Spain, friend of Erasmus and Sir Thomas More who looked upon him as a prodigy, lecturing with acceptance at Oxford and

* The order in which Erasmus suggests that Greek and Latin authors should be read, may be found in Compayre—“Doctrines de l’ Education en France,” Vol. I., p. 128.

Paris, author of several pedagogic treatises, and dying in 1540, and who is called by Schmidt one of the most eminent pedagogues of his age, ought not to be wholly unmentioned in a history of education, though his name has sunk into some obscurity. He agrees with Erasmus in his estimate of the importance of education; in regard to female education, which he would carry far enough to enable the reading of classic authors; in the emphasis which he lays on classic literature as the best means of culture; and in despising the scholastic practices which taught boys to dispute before they knew anything to dispute about. In this last connection, however, he shows himself more fair-minded than Ramus, presently to be mentioned, in his judgment of Aristotle; for he concedes his distinguished merit, while declaring that the world has advanced since the days of Aristotle, and that hence his opinions are to be examined and tested on their merits by the results of enlarged experience, like those of any other man,—an opinion which to a scholastic seemed a rank heresy.

I desire to call attention only to two points in his pedagogical opinions. (1) His ideal of the teacher is a lofty one. He should have fine scholarly attainments, that he may be able not only to teach, but also to inspire his pupils with a love of learning. He should have a faculty for imparting what he knows, that boys may learn easily, rapidly, and pleasantly. He should be of incorruptible morals that he may be a fit example for all those who come into his intimacy. He should

be characterized by paternal feelings towards his pupils; and should live worthy of the dignity of his important vocation, because fully conscious of its dignity. If this ideal of the teacher as he should be, be compared with the teacher as he too commonly was in those times, and continued to be for more than two centuries, it will be seen how excellent it is.

(2) The method which he recommends is far in advance of his age, embodying much that is best in our own day. For he would have all studies start from the pupils' standpoint of experience, and would have them at all times adapted to his powers of apprehension. To this end they should be presented *inductively*, the rules in grammar to be derived from observation of examples; the starting point in metaphysics to be in observation of mental phenomena; and in the study of nature, he would have the pupil begin with the observation of nature as the true source of all our knowledge, just as Sir Francis Bacon later demanded. Thus Vives appeals from a priori theory and from the authority of the ancients, to actual personal experience.

Moreover he would have the Latin explained in the vernacular by the teacher, at that time a most important innovation. It is also interesting to observe how clearly he distinguishes the *logical* order of a subject, from the order in which it must be presented in instruction that it may be rightly apprehended,—a distinction, it may be said, which is far from being observed even now by a considerable number of teach-

ers. He says, “doubtless it is needful in the exposition of a science to present always what is best and most perfect: nevertheless when we teach, it is needful to take care to offer nothing to pupils which is not within the range of their comprehension. The *artist* should seek perfection, and translate it into the rules of art; it is for each one then to strive to attain that perfection; *but the master* in his school should put himself at the level of his audience; he will not disfigure science, and will not teach falsehoods as truths; but he will say only things which his hearers can comprehend.”

Pierre Ramus, 1515-1572,

Pierre Ramus, born in 1515 of an ancient family, but which at his birth was so reduced that his father was a day laborer; rising by the sheer force of talent to be one of the foremost men of his time; eloquent professor in the College of France; pugnacious reformer in the realms of science and in the university of which he was an ornament; “the greatest French philosopher of the 16th century;” as pedagogue, the author of Latin, Greek and French grammars, of a system of logic, and of treatises on arithmetic, geometry, and algebra which were used as text-books for a century; one of the earliest adherents to the Copernican system; in philosophy, an avowed enemy to scholasticism with its hypotheses and fine-spun abstractions, and to Aristotle as their representative head; a contemner of mere authority, asserting reason as the supreme criterion of truth; this universal genius per-

ished in the massacre of St. Bartholomew 1572, a victim "in striking whom," says Compayre, "his enemies aimed not at the Protestant; they slew rather the enemy of scholastics, the adversary of the old methods, the indefatigable denouncer of the abuses of the University.*

His stormy career, made even more stormy than needful by his early attacks on Aristotle, was devoted to securing Conformity to Culture, by uprooting scholasticism, by reforming the plan of instruction in the University of Paris, and by founding Mathematics and a better Logic. Any contributions towards a conformity to nature, were wholly incidental to this chief effort. We will consider his services to this end as (1) professor, (2) promoter of the use of the vernacular, (3) reformer of logic, (4) author of better grammars, and (5) reformer of the University.

(1) As professor, he mingled eloquence and literature with philosophy, and his lectures were so interesting as to attract great crowds to his lecture room. He freed philosophy from the barbarous forms of scholasticism. He treated studies "after the method of Socrates, by retrenching the superfluity of rules and precepts, and by seeking and illustrating their use,—thus making the way plain and direct to come more readily, not only to the knowledge, but also to the practice and use of the liberal arts." He endeavored to introduce into logic, a certain *realism*, by substituting a solid and natural art for the hollow mediæval

* Hist. Crit. &c., I. p. 129.

formulas, and by conforming it to psychological principles. "It ought," he says, "to apply itself with all diligence to find what nature can do, and how she proceeds in the use of reason." In all things he vindicated the principle of freedom of thought. "Reason, he declares, ought to be the queen and mistress of authority."

(2) In an age when Latin was the almost exclusive medium of communication among the learned, and when, in the colleges of the university, and in those of the Jesuits after they were founded, boys were punished for using anything but Latin even in familiar conversation, Ramus aided to combat the prejudice against the vernacular. He demanded a translation of the Bible into French. He wrote also a French Grammar, for the use, he says, "of an infinite number of choice spirits who are capable of all sciences and knowledge, and who yet are deprived of them from the difference of tongues."

(3) His logic strove to free itself from Aristotle, but, says Compayre, in this effort, it really returned to the true logic of Aristotle, by shaking off the corruptions of scholasticism. Its great novelty was the introduction of *examples*. "To have the real laws of logic," he says, "it is not enough to prattle about its rules in the schools, but to practise them in poets, orators and philosophers." It is interesting to remark that a century after the death of its author, in 1672, Milton prepared an abridgement of this work.

(4) His various treatises on grammar had for prin-

ciple, "Few precepts and much use." They were also correct, and even elegant in form, a merit not usual in that age. Though they seem to have had little credit in France, they were largely used in Germany and Spain. In this connection it may also be said that his arithmetic and geometry were long used.

(5) In his demands for the reform of the University, he calls for a reform in the professors, in the expenses imposed on students, and in the subject-matter of the professional departments. As for the professors, he would have them fewer and better. He says "a crowd of men has arisen who without any choice, as well ignorant as learned, have undertaken to make a trade of teaching, in philosophy, medicine, jurisprudence, and theology. Hence has arisen the tempest which has laid waste all our fields." To this fruitful source, the excessive numbers of professors, often very incapable, he ascribes the crushing expenses to which students were subjected. Thus the expenses, which in arts were 55 francs, were for two years in medicine 881 francs, and in theology, more than 1000 francs. Much of this went, not to professors, but for useless formalities in a tedious course of circumlocution. To remedy this, he recommended that the king pay the salaries of needful professors, and exact the money therefor from the *monasteries*, "who would," he sarcastically says, "esteem themselves very happy and greatly honored to make this expenditure, if you, (the ng) only commanded them.

Furthermore he complains that the instruction in philosophy has been made private, thus requiring a needless number of professors, of whom many are inferior, and their teaching mostly an empty dispute about words; that mathematics are grossly neglected "without which all philosophy is blind"; that in the higher faculties, the professors had ceased to profess, contenting themselves with being present at examinations, and even making a merit of their indolence, by the plea that it was better for students to learn privately from books, whilst Ramus believed in the efficacy of good lecturing as an aid to students; that the faculty of law had abandoned Civil Law to pay exclusive attention to Canon Law; that the faculty of medicine neglected practical exercises, clinics, *materia medica*, and dissections, to devote themselves to the eternal disputes of the schools: and that in theology they do not study the Old and New Testament in the original tongues, to draw as near as may be to the original "Divine Light" of religion, "but rather a certain dung and filth of question books derived from a barbarism elsewhere unknown"; besides which he says they give insufficient attention to declamations and sermons.

A considerable extract from this vigorous indictment of the university has seemed to be here in place, not merely as indicating the educational views of Ramus, but because it gives an inside view of the kind of instruction then in vogue in the several faculties. The unsparing tone in which he criticises abuses also

leaves little reason for surprise that he raised against himself a swarm of enemies whose sinecures he attacked, and who, like angry hornets, seized the first opportunity to sting him to death.

The efforts of Ramus to secure conformity to the best means of culture then available, did not cease even with his death; for by his will he created an endowment for a chair of mathematics in the College Royal, which for more than two centuries was known as the *chair of Ramus*, which every three years was thrown open to the free competition of all mathematicians, and which gave to France a number of famous geometers. As a reformer of logic and promoter of mathematics, his name, after his death, became the distinguishing badge of a series of illustrious philosophers, who were known as Ramists in their devotion to the deductive method.

An interesting account of this striking personality may be found in Waddington's *Vie de Ramus*, from which the materials for this sketch have been in the main derived. Also Professor Compayre, in his "*Histoire Critique des Doctrines de l'Education en France*," Vol. I. gives a charming sketch of Ramus, of which a translation appears in the 30th volume of Barnard's *Journal of Education*.

Francois Rabelais, 1495-1553.

Francois Rabelais, born son of a French inn-keeper about the year 1495, or as it is sometimes said in 1483, and counted by Coleridge "one of the boldest and deepest thinkers of his age," was bred a Franciscan

monk ; but giving offence to his brethren, he was imprisoned by them ; and when released through the intercession of his friends, he was transferred to the order of Benedictines. Powerful friends withdrew him from his monastic seclusion ; he became professor of medicine in Montpellier, and later, reviser and corrector of text in a printing house. Being a man of deep and far-reaching thought in times when such thoughts were dangerous commodities to handle, he was led, in the words of Prof. Morley, "to the conception of a fantastic work through which he might, in times when men thought boldly at the peril of their lives, speak home and glance on to the higher future of humanity, while he professed only to shake the bells upon his foolscap."

This work is the widely famed "Life of Gargantua and the Heroic Deeds of Pantagruel." The hero is Gargantua, an enormous giant, of whose vast size we gain some intimation by the number of thousand ells of cloth that go to the manufacture of his various garments ; and all in which he is concerned is conceived on the same vast scale, even to the studious labors which he performs. Under the guise of this gigantic being and his travels and adventures, with those of his equally enormous son, Pantagruel, Rabelais contrives without much danger to himself, to convey his ideas of the men and things of his own time, and his hopes for the future ; and when he has uttered some specially daring idea, or some bold sarcasm on existing institutions, with a dextrous turn, the grave moralist

disappears, and we see in his place only the good-natured grin of the merry Harlequin. Who would think to call to serious account a harmless jester, amusing himself and the world after the manner of his craft, even if many of his jests bite to the quick! Under his conveniently grotesque disguise, therefore, Rabelais has contrived to become with impunity the keenest and wisest critic of his own times, and the inspired prophet of a better future.

What solely interests us here, is his biting satire of the scholastic education which then prevailed and of the many absurdities connected with it; and his theoretic views of what a right education should be. In these, under his grotesque mask, he is in full harmony with Erasmus and Vives; but he goes much farther than either of them in the direction of modern ideas, in regard to the proper subject-matter of education, as will presently appear.

His gigantic hero is put to school to a scholastic; his studies, his scholarly efforts, and his sports are amusingly related;* and the results of this schooling have a sarcastic emphasis given to them, when after fifty-five years more or less (for Rabelais is minute to months and days) given to this kind of training, its awkward, bashful, and helpless victim, ignorant of all that he should know, is brought into contrast with Eudemon, a properly trained lad of twelve, and "falls to crying like a cow, casting down his face, and hiding it with his cap." Still farther ridicule is heaped

* B. I. C's 13, 21, 22.

upon scholasticism, in the grave catalogue of the library of St. Victor* in which a long list of books with most absurd scholastic titles, is given, with a seriousness befitting a most weighty occasion.

The hero is now transferred to the more judicious tutorship of Ponocrates, the teacher of Eudemon ; and in the course henceforth pursued with him, and in the subjects he is set to study, Rabelais gives us his ideas of what should be the subject-matter and method of right education, and what will be its probable results.† Tutor and pupil go to Paris as the centre of enlightenment ; and here Rabelais finds occasion for another witty thrust at the hated scholasticism : for Gargantua while strolling about the city, takes a fancy to the great bells of Notre Dame, and carries them to his lodgings as playthings and appendages to his horse. Reclamation of the bells is made by Master Janotus de Bragmardo, a noted sophister ; and in his speech, plentifully interlarded with the most barbarous Latin,‡ great fun is made of the wretched scholastics. In all this, apart from the crusade against scholasticism, and in the letter which Gargantua when king writes to his son Pantagruel,§ Rabelais makes manifest that his object is to train boys for the practical activities of life, to make them useful citizens or wise rulers.

The means that he proposes for this include first of all, reverential devotion to God, not only by prayers made at fitting times, but by a pious observation of his works and meditation upon them morning and

* B. 2, C. 7.

† B. 1, C's 23 and 24.

‡ B. 1, C. 19.

§ B. 2, C. 8.

evening. To this he adds care for health by all the varieties of vigorous exercise, and by the constant practice of neat and cleanly habits; Gargantua, he says, "no longer combs his hair with his four fingers and thumb." For intellectual training, great emphasis is laid on language study; Latin is a matter of course, as a means for gaining all the rest; but of Greek he says that "without it a man should be ashamed to account himself a scholar"; to which also he would add Hebrew and Chaldean, as aids to Bible study, and even Arabic.

So far, Rabelais is merely in touch with the ideas of other theorists of his age. But he goes much farther than they in what he conceives that Conformity to Culture demands. He asks for a fair acquaintance with mathematics, astronomy and civil law; for a wide knowledge of history; and for a singularly exact study of nature.* He demands an acquaintance with the usual *Arts* and *Trades*, to be gained by visits to workshops in bad weather.† Finally he would inculcate a taste for the Fine Arts, music, painting, and sculpture, with skill in *fencing*, that his pupil may be a complete man, cultured at all points. It is obvious that we have presented here, by this seemingly grotesque jester, a singularly wise and comprehensive scheme of study, adapted to give a complete and all-sided culture.

In meeting the demands of a due Conformity to Nature, he is equally judicious. The methods that

* B. 2. C. 8.

† B. I. C. 24.

he represents as used with Gargantua are eminently objective, appealing in all possible cases to the proper use of the senses. Real object lessons are given at table by interesting conversations on the various articles that are set before them. Astronomy is learned by observation of the heavens. Botany is studied in the fields, with plants themselves, at first, and next by comparing the plants with poetic descriptions contained in the classics, i. e. Rabelais recommends "first things and then *about* things," which was then a wholly new and unexplored world of knowledge. He even devises means for the objective illustration of abstract sciences like geometry and arithmetic.

Again, he observes the principle that has now become an educational axiom, that mental discipline can be gained only by the personal exertion of the mental powers on the part of the pupil. Gargantua is incited to self activity, by being encouraged to independent work, by suggestions given only when he is at fault, and by being roused to personal reflection and *independent* thought on all subjects that are presented to him.

It is obvious that with so gigantic a pupil, no other than *gentle means* are possible, yet Rabelais leaves us in no doubt that gentleness is with him a choice rather than a necessity. Care is taken at night that all that has been seen or read during the day, shall be recapitulated in the pupil's own form of words. Severe study is duly alternated with vigorous open-air exercise in riding, swimming and wrestling, in playing at

ball and tennis, and in other games in which active youth delight. And finally at meal times and in leisure hours, Rabelais would have young fellows engage in improving conversation with cultivated and well-informed men. It will thus be observed that Rabelais proposes in point of method, all that is most vitally important in our modern modes of instruction.

Reference. Morley's ed. of Rabelais. Bk. 1, C's. 13, 14, 15, 17, 18, 19, 21, 22, 23, 24 and Bk. 2, C's 7 and 8.

Michel Eyquem de Montaigne, 1533-1592.

The last of the group of theorists which we are to consider in this century is one who is of even more importance to us than any of the rest, because of the influence which his views on education have had on John Locke and on Rousseau. This man is Michel Eyquem de Montaigne, born of a noble family in 1533; so trained up by an eccentric father that Latin was to him as a vernacular; learned, as well in all the wisdom of the ancients, as in whatever in his own age was most elegant and refined; and author of a famous series of essays on various social and philosophical questions, in which he has so judiciously used the stores of his vast erudition as to give a new value to what he has borrowed. He died in 1592.

His educational views are presented chiefly in the Essays on "Pedantry" and on "The Instruction of Children,"* the latter of which is addressed to Mme.

* Book I, No's. 24 and 25.

Diane de la Foix, one of his friends, and was intended to guide her in bringing up her children. Something of interest in this regard may also be gleaned from the essay on "The Affection of Fathers to their Children."* His essays are so discursive and withal so brilliant, so much seems worthy to be quoted because of its combination of weighty ideas with felicitous expression, that I find it especially difficult to bring the matter within due compass, and to give it that particular form which for the sake of clearness I have adopted in the other writers of this age.

In respect to conformity to culture, his polemic is against *Pedantry*, glancing only indirectly at scholasticism. Montaigne inveighs eloquently and wittily against the mere bookishness of his times, a spirit which was satisfied with saying "Cicero said this," or "these are the very words of Aristotle," and so was content to have no thoughts of its own. "I love not, he cries, this borrowed and mendicant sufficiency: Even if we could be learned with the wisdom of others, we can at least be wise only with our own wisdom. I hate the sage who is not wise for himself." He compares pedants to birds who go seeking grain which they bear to their broods without tasting it themselves;—to one who goes to his neighbor's to warm himself but neglects to carry any fire home with him;—and to a rich but ignorant Roman who kept several learned men by him to express on various subjects opinions which were his because he had bought them.

* No. 8, Bk. 2.

Of the pupil trained in this bookish way, he says, "His Latin and Greek have rendered him sillier and more presumptuous than before he left home. He ought to bring back a *full soul* whereas it is only *puffed up*; and he has merely stuffed in place of enlarging it." "What a harm if we are taught neither to think well nor to act well." Speaking of reason, he thus happily defines the function of education: "For she is not to give light to the soul which has it not, nor to make a blind man see: her duty is not to furnish one with eyes but to train eyes,—to regulate one's gait, provided he has sound and serviceable knees and feet." It would appear that the Ciceronians whom Erasmus had belabored, had, in the last part of the century, been transformed into pedants, with like results to culture; since neither took the trouble to have any thoughts of their own.

Montaigne, because he esteems education "the greatest and most important task of the human understanding," would make polite letters not the *end* to be sought, but the *means* whereby faculties may be developed, and the man fitted for usefulness in his life work. Hence he lays great stress on action as the expression of real knowledge. "These are my lessons, he says; he has profited more by them who *does* them, than he who only knows them.—He will not so much say his lesson as he will do it: he will repeat it in his actions: we shall see whether there is prudence in his undertakings, kindness and justice in his manners, judgment and grace in his speech,—moderation

in his sports, temperance in his pleasures, and order in his economy.—The true mirror of our instruction is the course and tenor of our lives.” It would be difficult to construct a better and more complete description of the results of a well-ordered and effective education, training judgment by its use, and encouraging independent thought, that its sharers may become men able and prudent, efficient and virtuous.

As regards the discipline of schools, he would have the course of instruction characterized by “austere mildness,” as far removed on the one hand from weakness and effeminacy, as on the other from that violence and force which debases and dulls a well-conditioned nature. “If you desire a boy to fear shame and chastisement, he says, do not harden him to them.” He denounces with vigor the severities of the schools of his time, and says that when you draw near to them, you hear only cries both of children begging for mercy, and of masters drunken with rage. He would rather make the path of learning for boys a flowery one, that “where their *profit* is, there may also be their *pleasure*.”

Of the means of training, he gives a generous assortment, lacking some things which Rabelais recommends, whilst emphasizing some which he omits. He sets high value on bodily training and fine manners, in which Locke follows him. “I desire, he says, that outward decorum and tact and good personal habits be fashioned at the same time with the soul. It is not a soul, it is not a body that we train; it is a man,

and it is not fit that we should separate them." The last sentence we shall recognize as an old acquaintance, when we meet it little changed in Rousseau's *Emile*.

He would have Latin learned, not in the grammatical way, but by conversation and use as he himself learned it. We shall see that Locke also falls in with this idea. Foreign tongues in like manner should be gained by means of the intercourse of travel among the important nations who use them. Good books he would have read and thoroughly digested, to form the judgment, while informing the mind,—an act which he aptly illustrates by bees which plunder flowers of their sweets, but make of them honey which is all their own. He lays much stress on History, "the anatomy of philosophy, by which the most secret parts of our nature are penetrated;" but he would have it so studied that the boy may gain from it, not mere facts, but the power to judge of facts, and thereby to attain worldly wisdom. Science should be so far studied, as to give that general view of nature and of our place in nature which befits the well-informed man who is no specialist. Indeed, being chiefly intent on the well-trained gentleman and man of affairs, he lays his chief emphasis on Travel, on Converse with men and things, and most of all on Philosophy.

He would have a judicious tutor to attend the boy on his travels and to regulate his intercourse with men; and he expects from travel these advantages; viz.: removal from paternal petting and injudicious fondness, with the concomitant strengthening of the

body and steadyng of the nerves ; knowledge of men of various nationalities and stations, their manners, characters, and language, that the boy may learn to value what is good, and to contemn what is bad ; and finally that the lad “may rub and polish his brains against those of others,” and by this wide knowledge of the world, may early correct a tendency to narrow views of things and to provincialism in judgment. “This great world,” he says, “is the mirror in which we must see ourselves, in order to know ourselves aright. So I wish that this be the book of my scholar. So many national characters, sects, judgments, opinions, laws, and customs, teach us to have a healthy judgment of our own, and train our reason to recognize our own imperfection and native weakness, which is no mean schooling.

Philosophy he defines as having “virtue for her aim.—Her fit and proper office is to know how to enjoy good things temperately, and to lose them with fortitude.—It seems to me that the first teachings with which we should nourish the soul, should be those which regulate its manners and its feelings, which teach it to know itself, to know both how to live well and how to die well.” What Montaigne means by philosophy in education is evidently what we should term a proper training of the feelings and morals, and this philosophy he justly says, “A child as soon as he leaves his nurse is much more capable of learning, than he is to learn to read or write. Philosophy has its lessons for the infancy of man as well as for his decline.”

Such seem to us to be the most important points in Montaigne's essays which concern the theory of education, its spirit, its purposes, and its means. Much of it we shall meet again in Locke, but presented in a loftier spirit. As for the boy who shows himself incurably disinclined to this elegant nurture, Montaigne bluntly says, "I know no other resource than to make him a pastry cook in some good city, even were he the son of a duke."

So far as concerns any tentatives of Montaigne looking to conformity to nature, it promises well for him that at the outset he clearly recognizes the great difficulty, as well as the importance of right nurture. This difficulty, he sees, arises from the obscurity of the signs of infant inclinations, and the consequent uncertainty of the judgments based on the "slight guesses which we form from the movements of this period of life." Hence it happens, he says, that "for lack of having chosen their course aright, one often labors to no purpose, and wastes much time in training children for that in which they can never excel." To obviate this difficulty, he proposes to limit early efforts "to guiding them only to those things which are [universally] best and most profitable." This idea is probably the germ which the paradoxical Rousseau expanded into his fancy of losing time to gain time.

Still farther, he would choose a tutor with a mind strong and well-balanced rather than very full; and, while he would like both, he would prefer good manners and a sound understanding, to mere knowledge.

This tutor he would then have guide his charge in “a new way.” This new way implies the most complete self activity of the child, in the free exercise of all his powers, in personal application of what he knows, and especially in the use of *judgment* on all that comes before him. He says of the tutor, “According to the nature of the spirit that he has in hand, let him begin by putting him to the test, permitting him to taste of *things*, to choose them, to discern by himself,—sometimes opening the door for him, sometimes leaving him to open it himself.” The tutor should accommodate himself to the ability of his pupil, a task which Montaigne acknowledges to be not easy, but rather “a mark of a lofty and very strong spirit to know how to condescend to those childish steps and to guide them.”

Furthermore he insists abundantly on *observation* and *experience* of things, rather than mere books in instruction. To this end is intended the foreign travel and the converse with men, on which he lays much stress. In ridiculing mere word-splitting and the quibbles of logicians, he says “let us leave them to misuse their leisure; we have other business. Let our disciple be provided with *things*; the words will follow but too abundantly.—I wish that *things* predominate, and that they so fill the fancy of the listener, that he shall have no recollection of the words.” And of those who say they know, but cannot express what they know, he says, “In my opinion these are mere shadows of formless conceptions, which they are unable to unravel and make clear within, and so can-

not express outwardly." This can hardly fail to recall Cato's famous saying "Get a firm grip on the *matter*, and words will follow fast enough."

His final word is this: "There is nothing like satisfying an appetite and desire for knowledge: otherwise we become mere asses loaded with books: we give to boys with blows of a whip, a pocket-full of science to keep, whereas to do well, it is not enough to merely *lodge* it with them; they should espouse it." The key notes to his pedagogic method then are these,—Self activity of the pupil in the use of all his powers and capabilities; things before words; judgment and understanding before memory; adaptation of instruction to the pupil's present abilities.

Let us now briefly summarize the educational services of the sixteenth century, and take account of the more or less novel pedagogical ideas which, during its course, were expressed by distinguished men.

The battle has been fought and won against mere ancient authority in the realm of thought, and, in that of letters, against scholasticism and pedantry, whether masquerading under the garb of Cicero or in a parti-colored coat made up of a patch-work of other men's ideas. As incidents of this victory, the new Humanistic learning has won its way largely into the old universities and secondary schools; a thorough reform and reorganization of the venerable university of Paris has been proposed by Ramus; and the human mind has very widely begun to assert its right to think freely, as it will, and on whatever it will.

Proposals have been made to widen the range of

studies,—through the introduction of history by Luther, Rabelais, and Montaigne,—of natural history by Rabelais,—and of mathematics by Ramus, who emphasized his recommendation by the endowment of a chair of mathematics. A demand for the better education of women has been made by Erasmus, by Luther, and by Vives. A thorough physical training has been insisted upon by Erasmus and Luther, by Rabelais and Montaigne. The need of careful attention to morals and manners has been emphasized by all save Ramus; and religion has been declared to be the needful basis of moral training by all save Montaigne, whose philosophy bears the stamp rather of the teachings of such enlightened heathen as Seneca and Plutarch than of Christ. Much therefore has been done to conform education to the best means of culture available in that age, or to show where such conformity was still needful.

Again, the chief source of difficulty in securing conformity to nature in instruction has been clearly indicated by Montaigne; the great pedagogical principles, of assuring the intellectual co-operation of pupils, of adapting instruction to their ability to grasp at all times and in all subjects, and of the need to use objective methods and to present subjects inductively—first the thing and then about the thing, have been proposed to succeeding ages to be by them adapted to the use of schools; and Vives has also made clear the difference between the logical order of subjects and the order in which they should be presented to the youthful intelligence.

CHAPTER IV.

DISTINGUISHED TEACHERS OF THE SIXTEENTH CENTURY.

Philip Melanchthon, 1497-1560.

Foremost among the practical educators of this century must be named Philip Melanchthon, the companion and judicious adviser of Luther in the religious reformation. He was born son of a pious and respectable armorer named Schwarzerd, in 1497, and died 1560 in Wittenberg where he had been more than forty years professor. His early education was carried on under charge of his maternal grandfather, who thrashed him soundly when he made mistakes in grammar, "in which wise," says Melanchthon, "he made a grammarian of me." His early promise attracted the notice of his uncle, the famous Reuchlin, who translated his name Schwarzerd into its Greek equivalent Melanchthon, after the scholarly fashion of the age. He received the bachelor's degree in Heidelberg at the early age of fourteen, and then went to Tübingen where he caught the enthusiasm of the New Learning, received his master's degree at seventeen, and when barely nineteen published an edition of Terence, whom he recommended "especially to youth as a teacher of life and of language." He mastered Greek; read Aristotle in the original that he might know his dialectics and philosophy, unmixed with scholastic corruptions; studied mathematics,

and even law and medicine; and in his twenty-first year published his Greek grammar. At the age of twenty-one, on the recommendation of his uncle, Reuchlin, he was made professor of Greek at Wittenberg where he remained till the close of his active and useful life.

His educational services here were three-fold, as professor, as school organizer, and as author of grammars, editions of classics, and several other text-books for school use.

As professor, his activity was extraordinary, and the range of his instruction astonishing. He lectured, says Von Raumer, on the Old and New Testament, on dogmatics, ethics, logic, and physics; and "besides, interpreted a crowd of Greek and Latin authors." His lectures treated subjects so fundamentally and clearly, and withal with such eloquence, as to attract to them a crowd of students, which reached at times 2000 in number. His influence over his students was seldom equalled; an influence which was due, not merely to his merited reputation as an instructor, but also to his uniform kindly care for their interests, his wise counsels in their difficulties, and his frequent extra-professorial help in their undertakings. "I can truthfully declare," he says himself in an academic discourse, "that I embrace all students with a paternal care and interest, and am deeply concerned in all that may bring them into danger," a declaration which his entire career as a teacher confirms. From his instructions went forth several men

animated by his spirit, to become famous directors of schools, amongst whom were Trotzendorf and Michael Neander, presently to be mentioned. Through this, as well as other services rendered to the Renaissance in its early years, he won the title of "Preceptor of Germany," as Rabanus Maurus had seven centuries earlier been called "First Preceptor of Germany."

The text-books which he prepared for schools, were a farther means of extending his influence in promoting the new learning. His Greek and Latin Grammars were written for the use of his pupils. In a later edition of the latter, in which he enters upon the praise of grammar, he says significantly, "In my first edition some things were missed. It should be added that too many rules *ought not* to be given lest boys be frightened away by prolixity." In his text-book of logic, which like the two preceding ones, was published in his early manhood, he says "The earlier (i. e. scholastic) dialectic has fallen into contempt, because it was no art, but only the shadow of an art, and led into endless labyrinths. But I present the true, unadulterated dialectic, as we have received it from Aristotle and some of his discreet expounders." Instead of denouncing Aristotle, like Ramus, because of the absurdities which had been attached to his system during ignorant ages, Melanchthon undertakes to present the real logic of Aristotle. His text-book of rhetoric published when he was only twenty-two, was intended as an elementary introduction to the rhetorical works of Cicero and Quintilian. He wrote

also text-books of physics and ethics, the latter in the form of a commentary on Aristotle's Ethics. All these text-books were characterized by clearness of definition, orderliness of arrangement, and simple elegance of language. They were long and widely used, passed through several editions, and had great influence in Germany.

Melanchthon also heartily interested himself in School Organization, through which he exerted a vast influence in Germany, as well by wise and timely advice given to those who purposed establishing schools, as by his plan for organizing the schools of Saxony, which grew out of his visitation of the Saxon schools and churches in 1527. In this plan he says that "parents should send their children to school in God's name, and train them for the Lord God, that He may use them for the good of others" in both church and state. In his schools he would have "Latin only, not German, Greek, or Hebrew studied," that the children might not be overloaded with either subjects or books, to the end that they might learn something well.

The schools should be organized in three separate *troops* or grades, in the first of which the children should be taught, reading, writing, and a good stock of Latin words, together with the Lord's Prayer, the Creed, and a few prayers; in the second, were to be pursued grammar and Latin reading of the simpler kind, also music, and portions of the scriptures to be well learned, with easy explanations of Christian

doctrines and duties. The third grade was to be composed of the élite youth, who, besides music, were to read the Latin authors of the higher sort, and to be held to speak Latin and write Latin letters and verses. The boys in this and in the second grade were to be thoroughly drilled in grammar; for Melanchthon believed that "no greater harm can be done to all arts, than when the youth is not well practised in grammar," which, as we have seen, had been thoroughly beaten into him.

Such were Melanchthon's somewhat artless ideas of a proper school-system, marked possibly by the crudity of a first effort at organization, but more probably controlled in form by the fewness of teachers in the schools of his time. We shall find this effort greatly improved in the work of Sturm, the great school organizer of the 16th century, whose plan was adapted for schools well equipped with teachers.

Johann Sturm, 1507-1589.

We shall do well to review next the services of the most renowned teacher of this age, one whose school organization has left its impress on the secondary school system of all northern Europe since his day, Johann Sturm, of Strasburg. Born in 1507, of respectable parents whose memory he always held in grateful esteem, he received his earliest schooling with the sons of the nobleman whom his father served as treasurer. In his early youth, he was for some years a pupil in Liege of the Brethren of the Common Life, from whose school he went at the age of seven-

teen to Louvain, where he spent three years as student and two as teacher. Thence he went to Paris, where he studied medicine, logic, and the Greek and Latin classics, where also he married, and had a large number of boarding students of several nationalities. At the age of thirty, his growing reputation caused him to be called to Strasburg, whose schools were in a wretched condition, to organize there the gymnasium whose success was to give him a lasting fame. He remained at its head for forty-seven years, when he was displaced as the result of a bitter church quarrel, and died five years after in 1589, at the age of eighty-two.

The fame of his school drew to it students from far and near, so that it is said of it that in 1578 its pupils numbered several thousand, drawn from no less than eight nations and from all social ranks, from princes to the sons of peasants; and, as has just been said, it became a model for a great number of other schools, amongst which were those of England. Its reputation was due to its clearly defined aim, its thoroughly systematic organization with due gradation of studies, and the thorough scholarship which was gained in all that was taught. Its aim was to train pious, learned, and eloquent men, and this it pursued faithfully and exclusively. The means that were used to secure this end, were exclusively literary; for religion, an acquaintance with the New Testament in Greek, much of which was to be memorized, together with the Catechism; for learning, a thorough ac-

quaintance with the classic authors of Greece and Rome; for eloquence, an elementary study of rhetoric and dialectics, illustrated and practised upon during the last three years in the ancient orators and poets.

From the examinations which were to be given in the last year of the gymnasial course, it would seem also that some very rudimentary acquaintance with arithmetic was given. Of other branches there was no mention. His aim therefore was perfectly simple and definite, and equally definite and simple were the means by which he strove to attain it. Likewise both aim and means were in complete accord with the ideal of his age. This ideal was the attainment of eloquence in the Latin tongue by means of the imitation of the ancient authors, who were supposed to have exhausted all the possibilities of knowledge. Indeed, according to Paulsen, there had arisen in this age a pedagogy which represented "the lack of eloquence as the source of all evils in the culture and morals of the clergy, and which believed that with eloquence would enter also wisdom and virtue which are inseparably united with it."

Sturm's method of teaching both Latin and Greek, aside from the thorough drill in grammar which was always to be given, was that of double translation from Latin into German and vice versa, from Greek into Latin and then back into Greek. A recommendation occurs in his directions to the teacher of the fifth class which is so similar to one of Roger Ascham's expedients that it deserves to be quoted.

"It is a good practice to cause some passage from the Latin orators to be translated into German, and then to give it in the school to be translated back, into Latin extempore; since the Roman orator himself plays the part of corrector instead of the teacher." Besides this reciprocal translation, there was much composition and verse-making, and a constant use of Latin as a means of communication. In the later years of instruction, the boys also took part in Greek and Latin comedies.

The pedagogic ideas which controlled Sturm's method, and which have been reserved for this place because they likewise gave color to his plan of organization, were briefly these :—all subjects are to be kept carefully within the range of the present abilities of the pupils: all teaching is to be made perfectly clear and definite: little is to be demanded at a time, but that little is to be thoroughly mastered and frequently reviewed; religion is to be taught by interpretation of the New Testament, and by memorizing considerable passages thereof.

With regard to Sturm's plan of organization, it should be borne in mind that it is the very earliest scheme that we have, looking to an *extended, systematic, well-articulated* course of studies for a school of several teachers, in which is assigned to each class such portions of the subject-matter of the course of instruction as is suited to the age and stage of advancement of its pupils. The schools of the Greeks and Romans, as we have already seen, bore no such

systematic character. The autobiographic account of Walafried Strabo in the ninth century, gives no indications of such a plan in one of the best monasteries in this most enlightened century of the Dark Ages. The simple plan of Melanchthon which has recently been mentioned, and the somewhat earlier three-class plan of Agricola, bear no comparison with the elaborate and thoroughly progressive scheme of Sturm.

This program, which seems to have had its suggestions in what he saw among the Brethren of Deventer, contemplated a gymnasial course of nine years, which later was extended to ten. It began at the age of seven years and ended at sixteen or seventeen. To this course succeeded an academic course of five years, in which the instruction was given by lectures. The school training was thus to end at the age of twenty-one or twenty-two. The first seven years were to be devoted to gaining a pure and fluent use of the Latin ; the next two or three, to acquiring ornate and logical speech ; the last five, to gaining the ability to speak aptly and to the point.

The details of this plan are much too lengthy to be given here even in outline ; but they may be found in full in Barnard's *American Journal of Education*, Vol. 4th, pp. 167 and 401, translated from the first volume of Von Raumer's *History*. It will be found interesting and instructive to peruse the careful instructions given to his associates ; and the intelligent school manager will be likely to rise from its perusal filled with admiration for the pedagogic genius of him

who devised it. For, as the head-master of Harrow has very recently said, “it is the time-table which is the test of the modern schoolmaster; it is there that he may win his main success. Yet it is only he who has been called on to essay it that knows where the difficulty lies, and how great it is.”

Valentine Trotzendorf and Michael Neander.

Let us now briefly sketch the pedagogic career of two of Melanchthon’s pupils, who became famous in their day for some special features of their method of teaching and management, which seem to me curious and instructive. These men were Valentine Trotzendorf and Michael Neander. The early education of Trotzendorf, who was born of a peasant family in 1490, in a village whose name he adopted as his own, was somewhat interrupted and neglected. When twenty-two years old, he sold his small inheritance, and went for two years to Leipsic, where he gained a knowledge of Latin and some acquaintance with Greek; when twenty-six he became teacher of a school near his home; and it was not until he was twenty-eight years old that he threw up his place and went to Wittenberg where for five years he was under the strong influence of Melanchthon and became an excellent scholar. Then he went to Goldberg, first as assistant and later as rector of the school, and there he spent the remainder of his life, save an interval of four years, so earnestly devoted to his duties as never to marry. He died in 1556.

The end that he proposed to himself was “that

the boys should be fitted hereafter to study in the higher faculties" of the universities. To this end, "first of all grammar must be pursued with special care as the mother and nurse of the other arts;" to be followed by readings out of good authors, first prose writers, "that the boys in both ways, both by rule and example, might be so guided to the Latin tongue as to learn to speak and write it skillfully," and next poets, that they might understand metrics and learn to make verses." The school laws direct that in their exercises, the boys "shall use no phrase until they have accurately inquired in what author that phrase occurs, and whether it is sufficiently elegant and suitable;" also that they shall never use their mother tongue. "Besides Latin, Greek grammar and the reading of Greek authors was prescribed;" "Dialectics Trotzendorf taught continually; and, through the speeches of Cicero and those in Livy, he prepared his pupils for rhetoric." Music and arithmetic are mentioned as studies in the Goldberg school, and "religion, he taught himself with pious earnestness," calling it the soul of his school and the soul of all instruction. Hence there is little in the subjects taught to distinguish it from other good schools of the time in Germany. To show the effect of the instruction, however, it is well to note that it was said that in Goldberg, during Trotzendorf's time, even the servants and the maids spoke Latin.

What specially characterized this school, however, was Trotzendorf's scheme of government, a scheme

whereby the pupils shared in the management, and were to a large extent made responsible for special features of the school life. He created various offices designated by Greek or Latin names, all filled by students, and having each its distinctive duties. One set of officers looked after the house order, the tidiness of clothing, and the times at which pupils rose in the morning and retired at night; others supervised the table order and the table manners of students; still others were charged with seeing that Latin was spoken, and that pupils studied diligently. There was also a school judiciary to take cognizance of offences, before which supposed culprits were tried, with some days allowed for preparing a good Latin defence, on the excellence of which largely depended how easily they were let off. Over all this student machinery of officers, stood Trotzendorf as "perpetual dictator," with functions partly executive, partly appellate. This scheme worked admirably in the skillful hands of its originator; and something analogous to it, has occasionally been tried since his day with varying success.

Michael Neander, born 1525, was the son of a shopkeeper who wished to make of him a merchant, but was disgusted at his lack of skill in managing a horse, and hence declared he was fit for nothing in the world but to be a monk. Many years later the old man rectified his opinion, when his good-for-nothing son had become one of the most famous teachers in Germany. The boy was sent to school, and at seventeen

went to the University of Wittenberg, where, under Melanchthon's guidance, his studies took a wide range which later showed itself in his school. At the age of twenty-two, he became assistant in a school at Nordhausen, with a wise old rector, and he tells most amusingly how his conceit was taken down, and how effectually he learned that "school work is quite a different thing from what young fellows think it." Finally at the age of twenty-five he was made rector of a cloister school at Ilfeld am Harz where he remained till his death in 1595, and made of it what Melanchthon pronounced one of the very best schools in Germany.

His career deserves mention here, not from the great size of his school, which was never very large, but from the things in which his practice differed from that of his contemporaries. An important point in which he diverged from other teachers was in his "sharp separation of the *elementary* from the *scientific*, of the indispensable and wide-reaching principles from the less needful or anomalous," i. e., of the matters which really belong to secondary instruction and which should therefore be *thoroughly mastered*, from those which properly pertain to the higher professional training. Hence resulted, that by giving exclusive attention to that part of instruction which properly belonged to him, "his pupils when they left him were so well-grounded in languages and arts, as immediately to fill positions in school or church," as was said by one of his contemporaries; or as one of

his pupils said, "Neander's boys, when they went to the university, were at once ahead of most others." He wrote many brief text-books of languages and of several sciences, which embodied this principle, and some of which came into wide use.

A second point in which he diverged from his contemporaries, was in the emphasis which he alone gave to history, to geography, and to physics, or more properly natural history. For all of these, he wrote manuals for instruction, and for the first two, also compends. His manual of geography is a very curious book, the names of places being accompanied by biographical accounts of persons, and in some cases by rambling autobiographical details. An ample account of Neander and his books will be found in Von Raumer Vol I. p. 180, a good abstract of which is given in Barnard's American Journal of Education, V. p. 599.

Roger Ascham, 1516-1568.

Roger Ascham, whose life extended from 1516 to 1568, and who was tutor to several distinguished persons including Queen Elizabeth, deserves a brief mention in this place, if for no other reason, at least for this, that he is much the best known English teacher of this century, and that he has embodied his practice and his opinions in a work entitled "The Schoolmaster" which has become an English classic. This book is chiefly occupied with a presentation of the author's method of teaching Latin, with frequent charming digressions on important pedagogic topics,

several of which have already been cited. His method with Latin was by double translation of Latin authors, accompanied by careful comparison of re-translations with the originals, and by frequent repetition to assure thoroughness. Like Sturm, he would set as exercises for the pupil translations from unfamiliar Latin works to be translated back into Latin, and then compared and corrected by the original. He would have the teaching of grammar limited to the *essentials*, and would have these learned only by their use; for he believed that grammar forms and rules are "sooner and surer learned by examples of good authors than by the naked rules of grammarians." Through recent re-publications, this interesting work is now placed within easy reach of all who care for educational literature.

Richard Mulcaster, 1530-1611.

The name of another worthy English schoolmaster and educational author of this century, has recently been rescued from the oblivion into which it had sunk, partly through the labors of the Early English Text Society, but more especially through the republication by Mr. R. H. Quick of his most important work. This man was Richard Mulcaster, who was born of a good but reduced English family about 1530. His early education was received at Eton, and in 1556 he graduated at Oxford with high repute for scholarship, especially in Hebrew. He then became a schoolmaster in London, and in 1561 was made the first head-master of Merchant Taylor's school, at the

munificent salary of 10£ a year, the hours of school being four in the forenoon and four in the afternoon. During a portion of his period of service, an officer of the company of Merchant Taylors, paid to Mulcaster an additional 10£ a year, making his emoluments at the utmost the equivalent of not quite a thousand dollars a year of our present money.

In this position he remained twenty-six years, during which, in 1581, he published "Positions," a work of great pedagogic interest, and not long after, "The Elementarie." Some disagreements with his employers had marked his experience in the school, due probably to the fact that he could not forget that he was of gentle birth, and hence thought himself superior to the tradesmen who employed him; and these disagreements finally caused a severance of his relations with the school. Some years later he became High Master of St. Paul's School where he remained twelve years, holding for much of the time a valuable living to which he had been presented by Queen Elizabeth who seems to have had a high regard for the sturdy schoolmaster. The last few years of his long life were spent in his living, where he proved but an indifferent preacher. He died in 1611.

At the outset of the "Positions," which is the work recently edited by Mr. Quick, Mulcaster manifests a rare good sense in stating the principles by which he proposes to be guided in his use of the opinions of authors. He proposes to test them by right reason and by their probable adaptation to the uses, circum-

stances, and modes of thinking of his own time and country ; and to adopt nothing, whoever may be its author, save as it has “ nature to lead it, reason to back it, custom to commend it, experience to allow it, and profit to prefer it.”

He declines to fix any definite age at which children shall begin their schooling, “ because ripeness in children is not tied to one time, no more than all corn is ripe for one reaping.” “ If,” he says, “ the child have a weak body though never so strong a wit, let him grow on the longer till the strength of his body do answer to his wit.” A little later, he emphasizes the careful regard that he thinks should be had, not less to the pupil’s physical development than to his intellectual progress, by devoting no less than *thirty chapters* of his work to physical education considered solely from the schoolmaster’s point of view. “ The soul and body,” he says, “ being co-partners in good and ill, in sweet and sour, in mirth and mourning, and having generally a common sympathy and a mutual feeling in all passions ; how can they be, or rather why should they be severed in training ? the one made strong and well qualified, the other left feeble and a prey to infirmity ? Will ye have the mind to obtain those things which be most proper unto her and most profitable unto you when they be obtained ? Then must ye also have a special care that the body be well appointed, for fear it shrink while ye be either in course to get them, or in case to use them.”

Nor would he have this care, so needful for physi-

cal efficiency, "left at random to liberty, but brought into form of ordinary discipline generally in all men, because all men need help for necessary health and ready execution of their natural actions, but particularly those men whose life is in leisure, whose brains be most busied and their wits most wearied, in which kind students be no one small part but the greatest of all, which so use their minds as if they cared not for their bodies, and yet so need their bodies as without the strength and soundness whereof they be good for nothing but to moan themselves, and to make others marvel why they take no more heed how to do that long which they do so well." When we consider that the chapters on physical training by gymnastic exercises and games, to which these wise words are the prelude, were written more than three centuries ago, and how comparatively recent are all efforts at proper bodily education, it will easily be seen that this old English schoolmaster was wise far beyond his age.

With regard to intellectual education also, Mulcaster has some ideas which were far from being common in his day. He would have elementary instruction include reading and writing, *drawing* and singing, and the ability to play on some musical instrument. The first two of these he thinks should be the common right of all; and, differing from the custom of his time, he would have the mother-tongue made the language in which the child should be first taught. He testifies his regard for the vernacular by writing his book in it, that it may be accessible, as he says, as well to-

the unlearned as to the learned ; for “ He that understands no Latin can understand English, and he that understands Latin very well, can understand English far better if he will confess the truth.” In his Elementarie published in 1582, he emphasizes the importance of a careful school study of English. Before proceeding to give seven precepts for the correct writing of English he says, “ For our natural tongue being as beneficial unto us for our own needful use as any other is to the people which use it, and having as pretty and as fair observations in it as any other hath, and being as ready to yield to any rule of art as any other is, why should I not take some pains to find out the right writing of ours, as other countrymen have done to find the like in theirs ? ” Why not indeed ? every well-instructed educator of to-day is ready to echo ; yet such a question was by no means a common one among the learned men of the sixteenth century ; and honest Richard, in the care that he enjoins for the literary study of English, was well-nigh three centuries in advance of any definite study of the mother-tongue in English schools.

While he considers the ability to read and write, the common right of all, he by no means favors the idea of Erasmus of giving a high education to as large a number as possible ; for he fears that a large class of learned men without intellectual employment may be uneasy and seditious, a fear that is coming to be expressed in more than one high quarter to-day. Yet he thinks that endowments for the encouragement of

higher learning, should go chiefly to poor boys who manifest marked ability, whilst they should be open on equal terms to the rich who will study, that such benefactions may not be degraded in general estimation to a badge of charity.

Mulcaster likewise makes an earnest plea for the right education of girls, basing it on these four grounds: (1) "the custom of the country which alloweth them to learn," (2) "the duty which we owe unto them whereby we are charged in conscience not to leave them lame in that which is for them," (3) "their own towardness which God by nature would never have given them to remain idle or to small purpose," and (4) "the excellent effects in that sex when they have had the help of good bringing up." What he thinks this correct female education should include would be, "reading well, writing fair, singing sweet, and playing fine," to which he seems inclined to add drawing and the ability "to understand and speak the learned languages and those tongues also which the time most embraceth, with some logical help to chop, and some rhetoric to brave," i. e. *adorn*. It is hardly necessary to add that in his scheme of female education, Mulcaster was far in advance of the age in which he lived. It is earnestly to be hoped that his chief work which is now placed in easy reach of educators may be widely read.

The Jesuit Schools.

The famous schools of the Jesuits which began in the middle of this century, and spread rapidly until

they covered all western Europe, deserve a more extended notice than is consistent with our plan. Their organization in five classes the last of which was of two years, was probably suggested by that of Sturm, though the age of admission to their schools was fourteen. The exclusively literary character of their studies, pursued for style in selections from classic authors, with the vernacular tabooed, and geography and history used merely for purposes of exposition, was very similar to that of the other good schools of the sixteenth century. Their aim however was seemingly more limited than that of the other schools which we have described : it was to develop the power to acquire and reproduce. Originality or independence of thought was no part of their object, nor was it encouraged. From this narrowness of aim, and from the alleged lack of deep morality based on principle which their system inculcated, sprang the faults with which the education they gave is charged.

It is hardly just to blame them for religious proselytism, as though they were the only sinners in this respect. During this and the succeeding century the Jesuits were far from having a monopoly of religious exclusiveness. In most great schools religion was inculcated, and of a type which was acceptable to the ruling powers. This the Jesuits likewise did, theirs being of the Romish type. Their success in this propaganda was due to the admirable skill they showed in gaining influence over their pupils, a skill not always displayed by those who opposed them. The care

which they exercised to preserve the health of their pupils, by proper diet, ventilation, and exercise ; and the attention that they gave to the cultivation of good and even elegant manners, were wholly admirable.

Their *methods* were skillfully adapted to the end which they proposed. They were uniform in character, kind and agreeable in tone, and adapted to win the love of the pupils. The work which they set and which was rigidly exacted, was carefully graded to the capacity of pupils, never excessive, and never too difficult. Difficulties of grammar were taught only when they occurred in the due course of reading. Daily and weekly repetitions were required to assure mastery. The oral and written examinations, which were given yearly, were carefully prepared for as to manner and form. The teaching which was mostly *oral*, was given methodically with frequent questions by the teacher, and with written notes, exercises, themes, and verses on the part of pupils.

The teachers, who were mostly novices of the order, with a much smaller number of the fully professed brothers, received a careful *previous preparation* for their important duties, in which they were usually engaged for from four to six years. A careful previous preparation of their lessons, according to a prescribed form was also rigidly exacted ; and their work was thoroughly *supervised*, at least once in two weeks, by the Prefect of studies.

The principle of Emulation, a motive so active among boys, was appealed to by the Jesuits in all pos-

sible ways. Places in class, badges for excellence, prizes for superiority, were freely and effectively used. The boys were arranged in pairs called rivals, to catch each other in any errors that might occur, or in opposing bands to challenge each other to scholarly combats by questions. Many teachers at present do not like the method, but it must be owned that it was used thoroughly and skilfully.

The schools of the Jesuits became so famous for the thoroughness and effectiveness of the work which they did, and for the mildness of their methods in an age when school discipline was of the heroic type, that they grew to be very largely frequented, it is said, even by Protestants. If the educational aim of the Jesuits seems to us narrow, it must in common fairness be confessed that it was well-nigh indistinguishable save in form of statement from that of Sturm. They as well as Sturm aimed at *eloquence*, and considered it synonymous with a facile and correct mastery of the Latin tongue. Like Sturm they emphasized piety, each side having its own definition of what was pious. The Jesuits also agreed with Sturm, and indeed with the current idea of the 16th century, in considering the wisdom of past ages as a kind of closed circle enclosing all that man needed to know, and hence strove only for the power of acquisition. The important difference lies in the fact that while the successors of Sturm rapidly outgrew their narrowness of view, the Jesuits showed little disposition to modify their educational opinions.

It is but just for us to remember that, whatever vices their system may later have made manifest, and which in the 18th century led to their temporary suppression in some European states, they were nevertheless skilful schoolmasters, and showed great practical sagacity; that they gave admirable care to physical education and to training in good manners; and that they were pioneers in the important matters of carefully *training their teachers* for their duties, and of a systematic *supervision* of their work while in progress. The motive to which they so largely and skilfully appealed for securing good scholarship, although now reprehended in many influential quarters, is still far from extinct, as is testified by our prize systems, our marking systems, and our practice of assigning relative rank in classes.

More detailed information about the Jesuit schools may be found in Barnard's American Journal of Education Vol's. V., VI. and XXVII.

CHAPTER V.

SOME CHARACTERISTICS OF EDUCATION IN THE SEVENTEENTH CENTURY.

During the 17th century we are not to look for any material change in the subject-matter of education. The struggle of the preceding age had, as we have seen, secured, in the schools and universities, a reasonable degree of conformity to the best means of culture then available. The ancient classical literature, with the correlated grammar and rhetoric, and with logic in an improved form *applied* to the study of the ancient orators and philosophers, had gained firm foothold in the schools. Mathematical studies, confined mostly to the universities, were more largely used in this century than in the preceding one, though arithmetic and algebra had not yet by any means attained their complete form. Vieta had but recently taken the decisive step of using letters as representatives of known quantities; and Descartes, during this age, introduced the use of exponents, explained negative roots, and showed the number of positive and negative roots in equations, besides enlarging geometry by devising analytics: moreover, Newton and Leibnitz invented the calculus only in the latter half of the 17th century. Hence, aside from the Euclidean geometry, and the elements of arithmetic, it may be seen that the mathematics

were hardly in a condition to admit of profitable study.

History and the sciences of nature, though, as we have seen, their study was suggested by some of the preceding theorists, were, and during this age remained, in a state which made them proper subjects for professorial research, rather than for the study of young men. Sir Francis Bacon, during this century, showed how this research should be conducted in the sciences; but not until the following century did Rollin attempt a work of this kind for history. Hence we should feel no surprise that the chief subjects of study during the 17th century were languages and their immediate accessories; nor are we warranted in concluding on this account that there was any marked lack of conformity to the existing means of culture.

The aim of education in this, as in the preceding century, in both universities and secondary schools, was wholly a practical one, utilitarian rather than disciplinary in its purpose, viz., the attainment of eloquence in the Latin tongue; and the imitation of the ancient authors was considered the essential means for attaining this end. To gain "verba et res," words and matter, was hence the care of teachers for their pupils. Authors were read, nominally at least, for both words and matter, though it is to be presumed that the words gained the lion's share of attention.

Why this purpose of instruction should at that

time prevail, grew out of two facts, as Paulsen has shown for Germany, and these facts were equally true for the rest of the learned world. 1st. Since medicine was then held in low esteem, and teaching was far from having become an independent vocation, there were then but two learned careers open to young men, the church and the service of the state, i. e., theology and jurisprudence, to both of which skill in the use of language was essential. 2d. The learned world was possessed by an idea similar to that which was held by the mediæval Byzantines, that the ancient Greeks had exhausted all the possibilities of science; and that consequently the work of learned education was to recover what the ancients knew, and to use it dextrously in the tongue so long consecrated to learned use. Hence the methods of all learned schools, dictated by this fact and this idea, were directed to the mastery of Latin, both spoken and written, for eloquence and matter, and to knowledge of the Greek authors for ideas and graces.

The crown of all learning in this age was poetry, i. e., the art of making Latin verses, to some proficiency in which it was thought that all might attain by due painstaking. To aid in this, collections were made, either by the students themselves or by others, of nice words, pretty phrases, and fine sentences. Dramas were represented to make the use of Latin more familiar; and Latin exercises were composed for all kinds of public occasions, real or imaginary, to

make obvious the use to which the acquisitions of pupils might be put. In all this, the practical and utilitarian purpose is sufficiently apparent.

The men of those times were, however, under no delusion as to the difficulty of the undertaking which they proposed to students. They saw that it postponed to a late period of youth the attainment of the wisdom which they craved, through the necessity of mastering its medium in two dead languages. They recognized this necessity as a fearful *grind*, and they freely expressed their envy of the Greeks who learned no language but their own. It would seem strange that this did not turn their attention to the propriety of improving and using their own vernacular languages, did we not take into account the idea with which they were possessed that everything worth knowing was embodied in the Greek and Latin tongues, that science was in truth a circuit already closed.

Much influence must also doubtless be attributed to the force of ancient usage, and to the natural pride of a learned guild. The idea of spending time and effort on these languages as a fine mental gymnastic had evidently not occurred to this age. This idea was reserved to a much later period, when the true humanitarian spirit which considers man himself as more important than any of his uses, had adopted humanistic studies as a fit instrument for its purposes.

With these remarks, which seem to me to be warranted by the facts of the case as regards the

means of education which continued to be used, let us proceed to observe what were the chief distinguishing features in the pedagogy of the 17th century.

These were, I think, the following, which we will proceed to examine in the order in which they are here given. 1. The marked ecclesiastical character and tone given to education; 2. the influence which begins to be observed in education of philosophers like Bacon, Descartes, and Fleury; 3. the practical efforts of noted pedagogues and theorists to reform the methods, the spirit, and to some extent, the *subjects* of education, in which category we shall have occasion to include Ratich, Comenius, the Port Royalists, Milton, and Locke; 4. the efforts that were made to promote the education of girls by Port Royal, by Fenelon, and by Mme. de Maintenon; 5. the rise in France of the great teaching congregation, the Oratory of Jesus, as a rival of the Jesuits; and 6. the beginnings of education in America.

The influence of ecclesiasticism in education was in the 17th century hardly less than in those that preceded it. The ancient church had certainly not changed its position of the absolute authority of the church in all that concerns the education of youth, and had with great sagacity met the demands for a better and more wide-spread instruction, by the establishment of the order of Jesuits, one of whose chief functions was to teach, whose teachers were all clerics and devoted to the interests of the papal see, and whose schools during this century spread rapidly

over Europe, bearing wherever they went the dominance of an ecclesiastical influence. The Port Royalists and the Oratorians, to be considered later, were other Catholic teaching bodies, of different and even antagonistic type, but equally controlled by ecclesiastics.

Amongst the adherents to the Reformation, the influence of the clerical element in the schools was hardly less marked. The most prominent teachers were clergymen, nominally if not really: the supervision of schools was in the hands of the clergy: creeds and confessions, catechisms and church dogmas, had a prominent place in instruction: and the purpose that was declared in the foundation of schools was usually the promotion of church interests, under whatever form of words it was veiled. Thus the early German school ordinances—for example that of the Palatinate—which became models for this century and the next, premising that the schools exist “not only to instruct the youth in all kinds of good arts, discipline and wisdom,” but that “they may provide wholesome and pious uses for the church and the common fatherland,” ordain that “by each and every pupil of the schools, the fear of God shall first of all be had in observance, and in accordance with the same shall they live in all their industry and conversation.—To this end shall all and every pupil be bound to no other than our princely (Kurfürstlichen) reformed catechism used in the city of Heidelberg,” in which it is directed that every class

be "most industriously taught memoriter." The rod is prescribed for those who go to sleep during morning and evening prayers or who absent themselves therefrom, as well as for those who curse or connive at cursing. In the words of K. Schmidt: * "They can look upon the school only as a dependent of the ecclesiastical class, as a daughter of the church; and are not yet able to distinguish school and church as two independent moral organisms, having each its own sphere and living its own life." It may be remarked that the emancipation of the schools from ecclesiastical dominance made little progress until the 19th century.

Unfortunately the tendency of the ecclesiastical spirit in this, as in other ages, under whatever name it was known, was to put upon its dogmas and confessions the stamp of authority, and then so to extend the domains of authority as to encroach more and more upon the legitimate realms of human speculation and investigation, thus forging new fetters for thought and striving to limit its freedom in exploring the still-undiscovered regions of mind and matter. It was the ever-recurring fear lest new discoveries which clash with received opinions and demand their modification, may in some way undermine the very foundations of eternal truth,—a fear which, proved groundless in one age, is sure to recur in a new form in succeeding ages.

To this hampering tendency of the ecclesiastical

* Geschichte der Pädagogik. Vol. III., p. 130.

spirit, which was strong in educational institutions, and which threatened to neutralize the results of the Humanitarian revolution, a wholesome corrective was presented by the rising influence of the great 17th century philosophers, Sir Francis Bacon and Descartes, and to a less degree, of men like Fleury. Prof. Compayré in his "Critical History of the Doctrines of Education in France," forcibly remarks in substance that every weighty philosophic system has in it the germs of a special influence upon pedagogy, and hence is of the greatest interest in the history of education. Nowhere is this more true than of the systems of Bacon and Descartes, though neither philosopher had education immediately in view.

Bacon, 1521–1626, by recalling the minds of men from barren scholastic speculations, and from exclusive humanistic study, to the relief of man's estate through the investigation of nature by exact observation and rigorous experiment leading to induction of her laws, — not only inspired the reformatory efforts of Comenius, the greatest schoolman of any age; but enlarged the resources of pedagogy by a whole new realm of profitable study, and by a *method* which has proved itself powerful in instruction as well as in investigation. Both the subject and the method had indeed been vaguely discerned as important and suggested as desirable, in the 16th century by men like Rabelais and Vives: it was left to Bacon to show how only, the knowledge of the one might be brought to the requisite degree of certainty, and the

use of the other could lead to reliable results. Our own age is a witness to the great gain that has thus accrued to pedagogy. The century in which he died witnessed the rise of that brilliant galaxy of English scientists and thinkers of which Sir Isaac Newton and Jeremy Taylor are the brightest stars, who built on the foundations which he had laid.

Had Descartes, 1596–1650, contributed to education nothing more than the fundamental maxim of his method, he would have deserved long remembrance in its history. This maxim, which was as far-reaching in the domain of speculation as was Bacon's method in the realm of nature, is this, “never to receive for true anything that is not known to be such upon reliable evidence: and to comprise no more in our judgments than what is so clearly presented to our minds that we have no occasion to call it in question.” The first part of this maxim deals a death blow at the claims of unsupported authority which too often contravene sound human reason, and asserts for the human mind its supreme right to think undisturbed by aught save the demands of thought itself: the last part formulates the proper law of thought, that it may avoid the danger of vague and unwarranted generalizations, and reach results worthy of respect. In the application of his maxim, he demands that the subject of thought be exactly analyzed, that this analysis be carried as far as possible before any conclusion is drawn, and that then, from the parts thus clearly revealed, a definite whole of thought shall

be formed by a right use of judgment, a procedure which is as valuable in pedagogy as in philosophy.

The affirmation which Descartes makes of the natural equality in human beings of latent power, or prepotency, to distinguish clearly and to reason justly, which however needs education that a good use may be made of it, would have as its natural corollary the doctrine that human inequality is due entirely to the kind of education that is received, and that hence the best instruction is the right of all, and not merely the privilege of a few. Probably few educators of the present day, however they might be willing to accept the deduction from Descartes' idea, would be willing to concede the native equal prepotency of minds, or to claim for education an omnipotent power in making men. Nor would many agree with his opinion, quoted by Sir William Hamilton in a slashing attack on mathematics as a means of mental discipline, that the mathematics are positively pernicious as discipline, since they disaccustom men to use reason in the mode which the conduct of life demands.* Doubtless Descartes had earned the right to express a weighty opinion on such a point, by his eminent services in promoting mathematical science; yet we may be permitted to think that the speculative philosopher had incautiously pushed too far an objection which would be valid only when urged against a too exclusive preoccupation with mathematical studies.

Finally Descartes like Bacon, insisted on the need of making ample provision of facts and *real* knowl-

* Edinburgh Review, Jan. 1836.

edge before striving to formulate opinions or to construct theories. In this regard, Bacon says in substance that if one who has not duly informed himself, undertakes despite his ignorance to shape reasonings and to write elegant phrases, it is "as if he wished to weigh and measure or adorn the wind." There is, however, a marked difference in that for which the two philosophers chiefly value facts; for while Bacon regards them as materials by whose right use we may attain wide-reaching general principles, Descartes looks upon them rather as means for strengthening the mind by the active exertion of its powers in their acquisition, that when thus strengthened it may become capable of discovering truth, a distinct approach, it may be observed, to a disciplinary view of studies.

It resulted from their different estimate of the use of facts, that Bacon has become the father of modern science, which by the use of his method is gaining an ever-increasing power to use the forces of the universe for the amelioration of man's condition; whilst Descartes, illustrious as a speculative philosopher and still more illustrious as a mathematician, did little of permanent worth when he applied himself to the study of nature. The influence on pedagogy of their principles and methods has been very weighty, and in that point of view alone, are we concerned here to regard them.

The Abbé Fleury, 1640-1723, whose fame as an impartial church historian has quite eclipsed his reputation as a philosopher, is yet regarded by his

countryman Prof. Compayré, as worthy of treatment in the latter respect; and from his interesting analysis of Fleury's treatise on the "Choice and Methods of Studies," I give here in condensed form what seem to me his most important educational opinions. His pedagogic experience, it may be remarked, had been gained as tutor to several of the French princes. Hence he disclaims any purpose to express any views on *public* education, which he says he had not examined sufficiently to warrant him in doing. It will readily be seen that the good abbé is rather a pedagogic theorist than a philosopher in his ideas. We may easily omit his censures of the scholastics and the pedants, whom the previous age had sufficiently and effectively belabored. What is most interesting in his opinions, is the *aim* that he proposes for education, and the *classification of studies* that he proposes.

1. Expressing a profound dissatisfaction with the education current in his time (1686), and considering it solely on its intellectual side, he makes its aim a two-fold one, first to make honest men, and then to make skilful ones. In other words intellectual culture should be so pursued as to attain completeness of manhood, while serving as "an apprenticeship for life,"—an aim considerably more elevated than was usual in that age, though it may be doubted whether he considered it in its fullest sense as I have expressed it. He recognizes inattention as the most formidable obstacle to the attainment of his aim, and of this he had had a striking example in one of the

princely pupils he had known, who was, says Compayré “inattention personified.” He traces the cause of this inattention to the fact that abstract truths and general formulas are presented to the child at an age when he can understand only the concrete and individual; and he proposes the true remedy for this, by presenting to the pupil, wherever possible, sensible objects, pictures and diagrams, and by striving in all ways to make instruction attractive. We shall see later the ingenious expedients resorted to by Fenelon, the colleague of Fleury, to render instruction both intelligible and attractive.

2. In his classification of the subjects of instruction, he makes two great divisions, one of which includes the knowledge that is needful for *all*, and the other the studies which belong only to the privileged class. Every one, he thinks, should have *his part* of instruction, but “the poor have no need to know how to read and write.” The knowledge needful for all, in his view is, hygiene, morals, and *logic*; by which he means the ability to preserve bodily health, to recognize and practise one’s duties, and to reason correctly on what may meet one in daily life. In regard to the last, great emphasis is laid on clear and distinct ideas, and on a right understanding of the language that is used. All this Fleury seems to think the poor can gain so as to be honest and capable in their stations, by examples and practice, without literary knowledge, without preparatory discipline, and with only the vaguest suggestion of any definite

teachers. Such a scheme would be obviously impracticable when applied to the masses of mankind, although doubtless life furnishes us a few remarkable exceptions; and, were skilled teachers supplied, they would soon find that the quickest way to reach the purpose of elementary physical, moral, and intellectual education would include a fair share of the literary culture which Fleury designedly omits.

The studies which belong only to the richer classes are separated into three great groups, viz., *necessary* studies, *useful* studies, and studies which are mere objects of enlightened curiosity,—a classification which can hardly fail to suggest Herbert Spencer's more elaborate scheme. What Fleury deems *necessary* studies are grammar,—by which I judge that he means the mastery of the vernacular on which he lays great emphasis,—arithmetic, economy, or a knowledge of things needful for life and how to procure and use them, and, curiously enough, *law*, a first suggestion of that civic instruction, on which just now so much emphasis is beginning to be laid. *Useful* but not strictly necessary studies, are history, logic, geometry, physics in which are included anatomy and cosmography, and languages like Latin which are to be used as *means*. As merely *Curious* studies, Fleury counts Greek, the modern languages, the ancient poets, mathematics save the elements of arithmetic and geometry, astronomy, the fine arts and designing.

In regard to the useful studies, he considers Latin

useful only in so far as it is a means of gaining what knowledge is embodied in it, and as a medium of communication with learned foreigners. He ascribes to it no disciplinary value, and contrary to the practice of his age, he would have in its study but a small amount of prose composition, and no making of verses save sufficient to learn the rules of quantity, and he doubts whether these are worth the trouble of learning them. On the other hand, as *necessary*, he would have the pupil make a careful study of his native language ; and he sharply criticizes those who neglect their vernacular to devote themselves to Latin, "not considering," he says, "that the Romans wrote in their own language and not in Greek." He recommends that the pupil be practised in French composition, writing "first narrations, then letters and other easy pieces, next biographic accounts of great men, and commonplaces of morals ; avoiding nonsense and false thoughts, let him express with gravity his real sentiments."

It is interesting to observe that what European writers on education are apt to call the *Americanization* of studies, meaning doubtless the emphasis laid on what is likely to be useful in a man's future career, was first proposed as a *definite scheme* more than two centuries ago by this eminent French historian and philosopher ; and that he possibly goes farther in this direction than Americans would be willing to follow him at present.

As respects the arrangement of studies, Fleury

would defer formal grammar to the age of ten years on account of its abstract character; would introduce logic at the age of twelve, which is much too early; and would have several lines of study carried on together, in order to develop the faculties simultaneously, and to guard against ennui by letting one study afford relief from another. Above all, he insists on the training of the judgment, while neglecting in his treatment of education, the cultivation of the sensibilities and the will, a curious oversight in a French ecclesiastic who was one of the most morally upright men of his age.

I have named as a third characteristic of the 17th century, that we have in it the beginning of a struggle to introduce practical reforms into the methods and spirit of education, and to widen the range of school subjects beyond the narrow and too exclusively Humanistic limits of Sturm and the Jesuits, whom we may here consider as types. This struggle on the same lines has been continued to the present day. Under whatever name carried on, it has been an effort, not always well-judged, to adjust the school subjects in conformity with the demands of an advancing culture, and to conform the methods and spirit of instruction to the real or supposed nature of the developing mind of the child, which too often was very imperfectly understood.

The leaders in this contest, whom Von Raumer terms *Innovators* (*Neuerer*) without intending to imply either praise or blame in the name he gives

them, were naturally enthusiasts, and hence liable to be unmeasured in their criticism of what they would reform, and disinclined to consider duly, in the changes which they proposed, the limits of the practicable. Thus reactions were sure to succeed to untimely and hence unsuccessful efforts at advancement; and we shall be likely to see considerable oscillations in educational opinions and practice in the course of this struggle, whilst on the whole a sensible progress may be observed towards the adoption of whatever in the purposes of the Innovators experience has proved to be judicious.

We have seen already in the most sagacious spirits of the 16th century, in men like Erasmus and Vives, Rabelais and Montaigne, obvious indications of an opinion that classical studies and efforts for classic purity of expression, were occupying too exclusive attention, and that very considerable changes were needed in the modes in which subjects were presented. They have demanded a larger place in instruction for history, mathematics, and the sciences of nature. They have shown that instruction may be made more profitable to the pupils by being invested with a living interest, and have in general terms suggested objective methods as a means for assuring such an interest.

Under the impulse of such previously-expressed theories, and inspired by the rising philosophic spirit of the 17th century, of which Bacon and Descartes were the most eminent representatives, the edu-

tional Reformers of this age began a gallant crusade, destined to be of long duration, against exclusiveness in the choice of studies, and against antiquated, ineffective, and time-wasting methods in the practice of the schools.

In the efforts of the Reformers, we shall be able to distinguish, I think, certain great fundamental points of general agreement amid many minor individual variations in opinion or in application of the same principle. In the second volume of his "Geschichte der Pädagogik" pp. 5-8, Von Raumer formulates as fundamentals, *eighteen* principles of the Innovators, in what seems to me a probably-unconscious spirit of hostile criticism.* From what Von Raumer has given, containing some propositions held by but few of the Reformers, I have selected nine in which there is, I think, a pretty substantial agreement among them. These we will consider in the next chapter; and they will furnish an appropriate introduction to an account of some of the most famous Reformers, while saving us the trouble of much wearisome repetition. They will, indeed, serve as a standard with which we may readily compare the efforts and the practice of many individuals.

* These will be found translated in Barnard's Journal Vol. VI. p. 459, in which is also given some account of Jesuit intrigues for the subversion of rival schools, as well Catholic as Protestant.

CHAPTER VI.

PRINCIPLES OF THE EDUCATIONAL REFORMERS.

In the last chapter, after observing what were the general facts in virtue of which the educational history of the 17th century has a somewhat special character, which differentiates it from the ages that preceded it ; we entered upon a closer consideration of the extent to which ecclesiastical influence dominated the education that was given ; and of the counteraction to this influence which began to manifest itself as a consequence of the acceptance of the Baconian and Cartesian philosophic doctrines. At the close of that chapter, I gave a general view of the purposes that the race of Reformers which then arose, strove to attain. Let us now consider in some detail the fundamental educational principles in regard to which there is substantial agreement among them. These were accompanied in individual instances, it may be remarked, with erratic and unreasonable views, which will be best considered when the occasions arise. Omitting such cases, and in some instances putting into a single statement what would seem to be only different phases of the same principle, I will state Von Raumer's eighteen propositions, under the form of nine principles.

(1) The Reformers insist on conformity to nature in the processes of education, yet frequently without

distinct ideas of what such conformity implies. For example, we shall find Comenius, the greatest of them all, drawing abundant strained analogies with the course of *external nature* in support of some of his propositions ; not distinguishing the nature of the youthful mind which *is* to be counted with, from the phenomena of the material universe, which, however striking may be their analogies with parts of the educative process, have really nothing to do with it.

(2) They oppose as a dead cram of memory the practice hitherto prevailing, especially among the philologists, of requiring much to be committed to memory which was not at all understood. "They desire to enliven instruction, since they take into account the understanding of children, in just the same measure that they postpone the exertion of memory." Hence they insist that nothing be memorized until it is understood, thus appealing to the memory through the understanding, and thereby fostering the intellectual activity of the child.

(3) Insisting with apparent justice that hitherto mere mechanical *processes* have held the place of methods, they offer *a method* of proceeding from the simplest, most obvious, and easiest elements of every subject, gradually unfolding its complex parts, and so advancing to the completed science by steps nicely graduated to the growing powers of the child. In this way they have sanguine hopes that the acquisition of knowledge will be made rapid as well as delightful, and that the necessity of punishment

will thereby be obviated. Some of them, like Comenius, prepared text-books to illustrate this method which were long in use, presumably with more satisfactory results than heretofore had attended instruction, and which we shall have occasion to notice hereafter.

(4) They emphasize the importance of the vernacular as the common study of all pupils, without which, as has before been said, anything like universal education is obviously impossible. At the outset, the Reformers contented themselves with insisting that the native tongue should be taught before the Latin or parallel with it, and that the learning of Latin should be made easier by its aid ; and the school books of Comenius, as we shall see, were intended to facilitate the acquisition of Latin together with *all useful knowledge*, by the aid of the vernacular. But the literary growth of modern languages, as well as the efforts of the Reformers, has tended constantly to push the Latin more and more into the background ; until, from being supreme in the realm of learning, and the consecrated vehicle of all that is worth knowing, it has been reduced to play the wholly subordinate, yet still very useful part, of disciplining some of the noblest powers of youth,—an office which was little thought of at the time which we are considering.

(5) The Reformers have insisted from the outset, and since that time with constantly increasing emphasis, upon the claims in instruction of those great

groups of studies which the Germans designate as Real studies, i. e., those in which skill in the use of language serves only as a convenient *instrument* for the expression of ideas. Thus Comenius and Milton and Locke would have Latin mastered as a means of "conveying to us things useful to be known;" whilst Basedow and Pestalozzi, Bain and Herbert Spencer, would remit it to Fleury's class of studies merely curious, and would strive after *Real* knowledge by the aid of the vernacular, with modern languages as possible convenient auxiliaries. In close alliance with this insistence on Real studies, has been the emphasis laid on proper care of the body and cultivation of its powers. This we shall see abundantly in the treatises of Milton and Locke, of Rousseau and the German Reformers, and in the widely influential treatise on Education by Herbert Spencer.

(6) A leading article of faith amongst the Reformers has always been a belief in the primary importance of cultivating the powers of observation through which we gain our introduction to the object world, and without whose accurate use they have believed that all our intellectual operations would be likely to be clouded with doubt or vitiated by error. The training of the senses had already been suggested by the preceding theorists : with the Reformers, it has become a principle. No doubt there has been a remarkable lack of skill in many of the efforts to give a systematic training to observation ; yet despite all failures, the present age is more than ever convinced

of its value and its necessity, as is witnessed by the establishment, in our higher institutions, of laboratories for all sciences.

An integral part of this principle, is a conviction of the necessity of utilizing in instruction the child's previous experiences, that he may become conscious of their relations to the various subjects he pursues; and also of the expediency of requiring *application* of what has been learned, that it may be exposed to no risk of becoming mere dead knowledge lodged in the mind, but may promote *faculty* or the ability to act in accordance with what is known.

(7) The Reformers have, it seems to me, been criticized with undue severity by Von Raumer, for the emphasis that has been laid by all the later ones, on the need that pupils should embody ideas as soon as they are clearly grasped in proper words and correct forms of expression. If indeed in some cases this principle has been so unskillfully applied as "to unduly hasten the natural course of development of children," or "to promote an unnatural and unchild-like introspection and self-observation," it can hardly invalidate the proposition that even as a body without the spirit is dead, so a spirit without embodiment is likely to be evanescent, and that hence the stock of really useful ideas cannot greatly transcend the powers of definite expression. Recall to mind in this connection, Montaigne's pregnant expression about clear ideas and the ability to clothe them in language.

(8) There has been an undoubted disposition

amongst all the Reformers to magnify the useful as means of education, and to prefer such a training as may assure worldly success. We have already seen that this has been termed with somewhat opprobrious meaning, the Americanization of education, yet it is very far from being an idea of American origin, as we have recently seen in the scheme of the Abbé Fleury, and as we shall have abundant occasion to observe hereafter. This idea is wont to be still farther stigmatized as devotion to "bread and butter studies." A not wholly unfair answer to such appeals to prejudice would be to demand the converse, i. e., the employment of studies obviously useless, merely as a mental gymnastic. A fair statement of the question would possibly be this, that chief emphasis in education should be laid on the development of the powers and capabilities of youth; that studies should be selected and arranged with chief reference to this purpose; but that, as between studies equally adapted to this end, either singly or in combination, the choice should always fall upon those which will best subserve the uses of life: and an additional reason for such choice is found in the natural utilitarianism of the young, who are always most readily interested in that of which they can see the use. Without interest there is apt to be little self-activity, and so, little real development of powers and capabilities.

(9) The greatest fault of the Reformers, I am inclined to think, is and has been, that in fact rather than in theory, they neglect the educational use and

hence the cultivation of the imagination. In this Von Raumer's indictment is possibly just though somewhat sweeping. He says "There is with them no thought of the Beautiful. Music, drawing, &c., they teach in a rationalistic and anti-artistic fashion: all poetry is thrust into the back-ground, or else treated with loveless and joyless coldness: we kill poems by analyzing and interpreting them." Severe words, yet useful, if they serve to direct our attention to a fault that it may be amended.

For it admits of little doubt that not only in the relish for poetry and the fine arts is there a legitimate work for all schools, but also that in the ordinary duties of instruction there is a wide sphere of usefulness for the *realizing* and *picturing* imagination, and that without it, very many studies like geography, history, literature of all kinds, and even ordinary lessons in reading, lose a large part of their value.

These then are what seem to me to be in general the fundamental ideas and tendencies of the educational Reformers, nearly all of which will, I suppose, commend themselves to our acceptance as worthy to be incorporated in educational practice, and likely in most cases to make the results of instruction better and more acceptable than they have yet become. It will now be useful to inquire, to what is due the latent and open opposition which such ideas have met, and the tardiness with which they are becoming effective in education; for we must bear in mind that it is nearly three centuries since this reformatory movement began.

Doubtless the most formidable obstacle which the innovations proposed by the Reformers have had to encounter, has been the intellectual conservatism of mankind. In virtue of this, men preoccupied with old ideas, and accustomed to old methods, are indisposed to listen to novelties, and still less disposed to accept them. Outside of the schools and the circle of school-men, too few people are inclined to trouble themselves with school questions, of the nature and reasons of which they have no definite idea, while they have still less comprehension of the results which are likely to flow from proposed changes. They leave all these to the experts, to the school-men. But the older, more experienced, and more influential among these, already habituated to other ideas and modes of work which they feel unable readily to change, are likely to oppose to novelties, not merely inertia, but active hostility, not less weighty because blinded by prejudice. It demands more than ordinary pedagogic genius to keep the mind always open, at all periods of life, to the access of new ideas, and to retain an always unbiassed judgment in the examination of such ideas.

It is therefore chiefly among the younger teachers, who are not yet fixed in an immovable routine, that new educational ideas and methods must look for their first converts, and work their slow and painful way towards a more general acceptance. Where seminaries for the training of teachers exist, and are in the hands of zealous and progressive men, ideas of

approved merit are more rapidly disseminated and utilized in the schools ; but such seminaries were unknown in the 17th century, and but little known in the 18th. Hence, when we consider the first obstacle only, there is small reason to wonder that the principles of the Innovators made but slow progress.

The second obstacle that was to be overcome existed in the very nature of the changes that were proposed. They were *novel* in the very highest degree ; and, as Von Raumer aptly remarks, they widened the pedagogic horizon so excessively that the unaccustomed sight could not compass it. They ran counter in nearly every respect to the current ideas and the current practice of the age. The set of school studies, as we have already seen, was almost exclusively in the direction of Greek and Latin authors : the Reformers demanded that the curriculum should be enlarged by the addition of many new studies, for which in many cases books suitable for school use were lacking, and for all which no teachers were at hand, learned in the subjects and trained to present them properly. Latin was the common language of the schools, and was consecrated there by an immemorial use : the Reformers ask that it shall abdicate its exclusive empire in favor of vernacular tongues.

The usage of the schools appealed almost solely to the memory through the agency of persistent drill, without any too curious inquiry as to the adaptation of subjects to the student's capacity, in the blind confidence that at some future period what was mem-

orized might come to be understood : the Reformers demand that henceforth subjects shall be graded to the abilities of pupils, and that nothing shall go into the memory which has not previously passed through the crucible of the judgment and understanding,—thus asking of teachers that they shall exchange an easy and mechanical customary routine for a method which would require of them an activity of spirit as incessant as should be the efforts expected from the pupils.

The power of acute and accurate observation had become well-nigh atrophied in both teachers and pupils by ancestral disuse : the Reformers ask that this dormant power shall at once be called into active use, in the interest of the understanding, and for the purposes of instruction. Hitherto the body had been left to care for itself, with the usual result of devastating epidemics ; and school-rooms had from mediæval times been dark, gloomy, and full of evil smells : the Reformers demand now that the body shall be duly cared for by the observance of the ordinary conditions of healthy living ; and that communities shall at once be at the expense of supplying as suitable accommodations for the nurture of their children, at least as they do for the keeping of their horses.

We need go no farther in this contrast of what had so far been, and what is now demanded in the way of change. It will readily be seen that however reasonable all these demands may seem to us, they would naturally appear excessive to the men of the 17th and

18th centuries; that they would be likely to appear to them, not a series of needful changes, but a complete revolution ; and that so vast a widening of the pedagogic horizon would require generations to prepare the unaccustomed vision to compass it, in its full extent. This consideration may possibly prepare us not to judge too harshly of the tardiness in reforms of the two centuries preceding our own ; especially if we reflect that *we* have not yet fully reached the measure of what ought to be expected from us.

We have seen that two obstacles to the ready acceptance of proposals for educational reforms grew respectively out of the inertia of human nature, and out of the novelty of the proposed changes. A third obstacle sprang from a source that would hardly be anticipated, and that was from the Reformers themselves. Enthusiastic as they were, and deeply penetrated with a conviction of the value and necessity of what they proposed, they yet had not grown to the full measure of their own ideals. Astonished as they doubtless were, at the inertness of their contemporaries, like them, they had themselves great need of growth in the full apprehension of what was implied in the reforms which they advocated. Hence they were not always completely in harmony with their own fundamental principles ; nor were they usually wholly successful in exemplifying them in practice. To them the ancient sarcasm “physician, heal thyself,” might often have been justly directed.

Reformers are not more likely to be perfect than

other men ; and sometimes the personal characteristics of the educational reformers were not such as to win favor to the doctrines that they preached. Thus their first representative, Ratich, made a dismal failure of all his efforts, due even more to his hateful traits of character than to his lack of practical skill in exemplifying his principles ; and the ill success of Basedow in the 18th century was due, at least in part, to personal causes, whilst his public was in an expectant and receptive mood.

The really great Comenius often shows his lack of thorough comprehension of his fundamental ideas, by violating them again and again in the school-books that he wrote ; and both his text-books, and his darling pansophic scheme, reveal how greatly he overrated the powers of mental assimilation in youth, and how fearful a load he imposed on *memory* : his Janua, for example, in which he treats *all knowledge* in a fragmentary way, expects a youth in mastering this to master 8,000 Latin words. The brilliant Rousseau pushes sound principles to whimsical extremes, and somingles them with paradoxical expedients, as to leave one uncertain where to find the boundary line which separates principle from paradox,—thus becoming rather the inspirer than the leader of reformatory efforts. Even the venerated Pestalozzi, who now stands as the representative of the triumphing reform, was distinguished rather by flashes of pedagogic insight than by any firm grasp of principles, which he constantly violated ; and he owes his en-

during fame to his peculiar personality rather than to any thorough exemplification of pedagogic principles. It is possible that the critical spirit which Von Raumer displays in presenting the principles of the Reform, is aimed largely at the embodiment of them which he had for some time observed in Pestalozzi's often inconsistent practice.

Besides errors arising from the imperfect apprehension by the leading reformers of the demands of their own fundamental ideas, and which delayed the changes that they desired ; certain individual vagaries of opinion may possibly have caused judicious persons to distrust the entire scheme which they represented. Thus Comenius was inclined greatly to overrate the shaping power of school-education, and almost seemed to fancy that it can make of a child what it will : others overrated the results likely to flow from the methods which they advocated, like Ratich and Basedow ; or joined with this a disposition to underrate the influence of the teacher's personality, as did Pestalozzi, who dreamed that methods of instruction might be so *mechanized* that their results should depend, not on the skill of the teacher, but on the nature of the *processes* that he used. The opportunities for hostile criticism which such extreme opinions in prominent persons would afford, can readily be imagined ; and also how easily they could be made to cloud with doubt the validity of an entire body of pedagogical doctrine, their connection with which was a mere unessential personal accident.

Such then were the formidable obstacles which the struggle initiated in the 17th century for the enlargement of the circle of studies, and for the improvement of the methods of instruction, has had to meet and slowly to overcome. They were such as every beneficial attempt to reform existing usages has been obliged to surmount; and, moreover, they were in their very nature such as to demand for their removal, generations of educational progress, and the slow growth of better and more enlightened opinions. Hence it should afford no just occasion for surprise that educational principles which are mostly so obviously just, have met with an acceptance so tardy, and that we ourselves are called upon to be actors in the final stages of a crusade which was begun nearly three hundred years ago. May we, by learning wisdom from the past, prepare ourselves to act wisely our part, as inheritors of its experience.

CHAPTER VII.

THE SEVENTEENTH CENTURY REFORMERS.

Wolfgang Ratich, 1571-1635.

Wolfgang Ratich or Rathke, was the first of the Innovators who attempted to give a practical form to theories of education. He was born in Holstein in 1571, received a good education at a gymnasium and at the University of Rostock, and afterwards spent a number of years in England and in Amsterdam, engaged in various studies, amongst which were Hebrew and Arabic. When about forty years old, he began an agitation for a reform of the methods of education. In 1612 he offered a memorial to the German Empire at the diet in Frankfort, in which he proposed with the help of God to show how various languages may be taught easily and learned more thoroughly and quickly than heretofore; how schools may be established in which all arts and sciences may be thoroughly learned; and "how in the whole kingdom one and the same speech, one and the same government, and finally one and the same religion, may be commodiously and peacefully maintained."

This memorial attracted favorable attention from some of the German princes who supplied him with money for his enterprise and appointed two learned commissions to examine his scheme. Both of these

commissions made favorable reports. Near the close of his life another commission likewise reported favorably upon his ideas. From this it would appear that his propositions for reform were met at first, not with prejudiced opposition, as might have been expected, but rather with favor. Hence the utter failure of all his efforts was due, not to either of the first two obstacles mentioned in the preceding chapter, but to the remarkable defects of his own character.

Von Raumer gives a long account of Ratich, which has been translated in Barnard V., p. 229; to which Dr. Dittes has added much of value that has recently come to light in some of the letters of Ratich. Both these, and especially the latter, reveal his personal traits of character in a most unlovely light. These we will consider later as showing what one should *not* be to succeed as a reformer. For several years after his Frankfort memorial, he made unsuccessful attempts to found schools in various cities, all of which failed "because he would neither give a specimen of his method nor impart a plan," fearing lest his secret might be filched from him and enure to the advantage of education through some one else. Indeed "he had declared that he would only sell his discoveries to a prince at a dear rate, and upon the consideration that the men of learning to whom he should communicate them should promise to conceal them." One of his contemporaries pertinently asks "Would Christ, the apostles, and the prophets have done so?" These were the acts of a charlatan peddling some

secret quack nostrum, and as a charlatan he was discredited in South Germany.

Yet in 1618, he found two princes who were influenced to aid him, the Duke of Weimar, and his relative, Ludwig of Anhalt-Köthen. Under their patronage he went to Köthen, where learned men were engaged as his assistants, and a printing house established to prepare text-books embodying his method in six languages. After more than a year spent in preparation, the long-expected school opened in June. 1619, with about 430 boys and girls divided into two divisions, a lower and an upper one, each of these having two or three grades. In the lower were taught in German the usual elementary branches, the upper division advanced to Latin and then to Greek.

Soon complaints from the inspectors, then quarrels of Ratich with every one around, began ; he first complained to the prince, his patron, then slandered and insulted him ; and in little more than four months from the opening of the school, we find the Didaktiker, as he was called, in prison with only a Bible for his companion which he was advised to read and profit by. After several months in prison, he was released after signing a humble retraction of his slanders, and acknowledging that he had professed what he could not perform.

Then he went to Magdeburg, where at first all was favorable to him ; but here too was repeated the same story as at Köthen with some variations. He quarrelled with the magistrates ; he intermeddled with

church matters, and quarrelled with the pastor ; his secretive and jaunty ways offended others ; news of his conduct at Köthen came to add to his disfavor ; and in 1622 he was again without a place. For some years afterward he went from place to place supported by certain princely personages, always just about to do great things, but always prevented by wicked and envious persons who wanted to steal his precious discoveries ; he was sought out by Oxenstiern, the great Swedish chancellor, whom he treated somewhat cavalierly ; was solicited for counsel by Comenius whose letter he never answered ; and finally ended his unhappy life in 1635 at Erfurt, dogged always by evil spirits of his own raising.

Aside from the fact that he was the first of the Innovators, the career of Ratich seems to me chiefly useful in the history of education, as an example of what a successful school reformer should not be. He had no practical ability as a teacher or manager. At Köthen he did not pretend to teach himself, but only to impart his secret methods *confidentially* to his subordinates. Any practical experience in teaching might have guarded him from pretending to teach to old or young the mastery of any language in six months by three or four hours' study a day,—a pretension so absurd that it might justly discredit with judicious persons any merits that he possessed.

He utterly lacked the worldly wisdom and prudence which any successful teacher should possess, and especially if he adopts the role of a reformer. This lack

is markedly shown in his treatment of all his benevolent patrons, and was amusingly exemplified in the case of Oxenstiern, who told Comenius that after he had taken great trouble to see Ratich, the latter, instead of granting him an interview, sent him a thick quarto to read. "I surmounted the tedious work," says the Swedish chancellor, "and after running through the whole book, I saw that he depicts the faults of the schools not badly, but the remedy which he proposes for them, seemed to me insufficient."

His faults of character, as they are depicted in his letters, as well as in his career, were such as to unfit him for any influence among men. He was conceited and boastful to an astonishing degree, ready always to vaunt what he could do to an extent that only the greatest performance could justify, and that his failures made ridiculous. Without ability to direct, he was arrogant and tyrannical to all who were about him ; he had a violent and slanderous tongue which he did not restrain from blaming and speaking ill of his benefactors as well as of his coadjutors ; he was quarrelsome, as we have seen ; his suspicious temper disposed him continually to conjure up phantom enemies who were laying traps to surprise his secrets ; and withal, he had no real love for the profession that he pretended to reform, no deep and abiding interest in its well-being, but merely a petty self-seeking desire to reap profit and credit from his discoveries, accompanied by a haunting fear that some one might forestall him in this. Dr. Dittes thus sums up the

lesson of his life : "Moreover his career is an eloquent proof of this truth, that theory alone is no surety for practical success in teaching : that this rather presupposes skill, patience, worldly prudence, unbiassed sense, and before all, pure devotion to the idea of human culture free from vanity and personal ambition."

But it may reasonably be asked, had then Ratich's ideas no merit ? Undoubtedly. His great merit, in my opinion, is that he first conceived the need and importance of a systematic *art of teaching*, and gave thereto some helpful precepts which he himself could not successfully exemplify in practice, and the efficiency of which he as grossly overestimated as he seems to have undervalued the personal agency of the expert teacher,—the latter being an error into which unpractical *methodikers* are peculiarly liable to fall. The commission of Giessen professors who early reported favorably on his scheme, after detailing some of its prominent ideas, conclude that his method "has its sure foundations and its definite rules which are derived from the nature of the entire man, senses, memory, and reason, as well as from the peculiarities of the arts, sciences, and languages." They emphasize his art of teaching as enabling one "to do his work much more safely, surely, and perfectly," and say "Therefore it is necessary that there be an especial art, in accordance with which every one who desires to teach may direct and guide himself, that he may pursue his calling, not in accordance with his

mere unaided judgment and guess, nor also only according to his inborn discretion, but in accordance with the *art of teaching*; just as he who wishes to sing correctly must be guided by the art of singing."

Of the maxims which make up Ratich's Art of Teaching, Von Raumer gives nine, and Schmidt thirteen. I will give them briefly, combining some with others to which they are allied, and premising that of those which I shall state, the last four and the first do not appear in Von Raumer's list. 1. Learning, so far at least as reading and writing are concerned, is an universal right from which no one should be debarred. 2. Everything should be learned first in the vernacular, and pupils should proceed to other languages, only when they have become ready in their own. 3. The order and course of nature should be followed, proceeding from the low and simple to the great and high. 4. Teach but one thing, one language or art, one book at a time, and pass to no other till that is mastered; an idea which would bore instead of interesting pupils, if followed. 5. Often repeat the same thing, repetition assuring memory—a maxim which Ratich applied in a most tiresome method of teaching languages, and which in this century has been the basis of the once famous but now exploded systems of Hamilton and Jacotot. 6. Let nothing be learned by rote, that the understanding may not be weakened. 7. Let there be uniformity in all things, in books as well as methods, that languages and *every art* may be presented by

the same method and on the same plan. This ignores the capital fact that every chief group of studies has its own peculiar subject-matter, and its own special method, e. g., mathematics, and natural science. 8. Matter should be given first, and then rules and principles, e. g., language first, and then the grammar of the language. 9. "Let all be taught by *experience* and piece-meal investigation, and verify every rule by examples. 10. Let no pupil be beaten on account of his learning, but only for obstinacy and evil ways. 11. Let separate schools be established for different languages. 12. Let each school have its special teacher, who shall at stated times give reports to the higher school authorities. No.'s 11 and 12, it may be seen, are merely corollaries of No. 4. 13. Girls should be instructed by proper and skilful women.

Of these thirteen maxims, six are expressly or by implication, common to Ratich with the succeeding Reformers. His method, so far as he developed it, was applied only to languages, though Helvicus, one of the Giessen professors, had early drawn attention to its applicability to science teaching. Ratich, however, seems never to have proposed science teaching, and to have considered logic and rhetoric as *Real* studies. Some of his maxims if applied would lead to absurdities, especially the 4th with its correlated 11th and 12th. The 5th which is good in its proper place, he made the basis of an extremely tiresome method. The 7th might be so used, within due limits, as to be useful ; yet as he states it, it is incompatible

at present with good teaching. The first and last maxims, which belong not to the art of teaching but to school statesmanship, are now generally accepted ; but Ratich borrowed them from Luther.

His career is of interest solely as being that of the first of the Innovators, and in any other country than Germany it would have remained in the oblivion to which failures are consigned, and from which it has been exhumed only by painstaking research.

John Amos Comenius, 1592-1671.

This great educator, organizer, and reformer was born in an obscure town in Moravia in 1592. His parents dying when he was still very young, his early education was greatly neglected by his guardians, so that he had only the barest elements of knowledge up to his seventeenth year, when first he was sent to a Latin school. As Prof. Laurie says, this belating of his education was probably an advantage to pedagogy, since from the relative maturity at which he entered on the study of Latin, he was made more keenly aware of the exceeding badness of the mode in which it was taught, and hence was prompted to efforts to improve it.

Of the schools of his boyhood he feelingly says, "they are the terror of boys, and the slaughter-houses of minds,—places where a hatred of books and literature is contracted, where ten or more years are spent in learning what might be acquired in one, where what ought to be poured in gently is violently forced

in, and beaten in, where what ought to be put clearly and perspicuously is presented in a confused and intricate way, as if it were a collection of puzzles,— places where minds are fed on words ; ” and again he says, “ Boyhood is distracted for years with precepts of grammar, infinitely prolix, perplexed, and obscure, and for the most part useless. Boys are stuffed with vocabularies without *associating words* with *things*, or indeed with one another syntactically.” I quote here these words of his from his biographer, Prof. Laurie, both to show the nature of the processes against which he fought, and the impression that they made on the young scholar.

At the age of twenty we find Comenius studying at the University of Herborn and later at Heidelberg ; at twenty-two he was teaching a village school in Moravia, and striving to better methods by simplifying Latin grammar ; and at twenty-four he was ordained to the ministry of the Moravian Brethren and soon after married. The breaking out of the Thirty Years’ War in 1618 disturbed his peaceful pursuits ; early in its course, all his property was destroyed, including his library and manuscripts ; for some years, his life was spent in hiding places ; and in 1627, he was banished from his native land never more to return. In his exile, his improved and simplified school-books and other pedagogic labors made him famous. He was summoned to England, to Sweden, and to Hungary for aid in the bettering of learning and improvement of schools ; and in 1654 he was offered and declined

the presidency of Harvard college, his fame having reached even far distant America. His long and useful career was brought to a close in Holland in 1671.

In skill in teaching and organizing, in freedom from jealousy and readiness to coöperate with others, in gentleness under detraction, in readiness to adapt himself to the men with whom he was brought in contact and to the circumstances in which he was placed, and in simplicity and modesty of nature,—his entire career and character were in marked contrast with those of the unhappy Ratich. He lived for others rather than for himself; fame sought him rather than was sought by him; and he has no need now like Ratich of an industrious historian to rescue his name and efforts from oblivion. America unites with Germany in celebrating with appropriate ceremonies the third centenary of his birth.

To this brief sketch of his life, in which I have confined myself to what might give insight into his pedagogic career, must be added this remark which will reveal the cause of the intense "*Sense-Realism*" and the grasping after universal knowledge, which appears in all his school books. He was profoundly impressed with the views of Bacon; and through the hold that Bacon gained upon him, the philosophic spirit of that age gained its most-enduring influence upon pedagogy. But he was troubled because "the noble Verulam, while giving the true key of nature, did not unlock her secrets, but only showed by a few examples how they should be unlocked." He dreamed

of being one of those who should further this great work by "the issuing of a complete body of science as then understood," that investigators might clearly know the point from which they should start in its advancement. "This complete statement of the entire circle of knowledge he called Pansophia." This he desired to make his chief work in life. For this he made great collections of materials which he called his Silva of Pansophy, and which were burned with his library in Poland in 1654. His pedagogic labors were always with him mere incidents in a career which he intended chiefly to devote to pansophy ; and thus, like many another man, his incidental services were of vastly greater moment than the work which he really intended. His pansophic work was never realized, and would have been of no great service had it been completed ; but his pansophic ideas were ever with him, and color all his educational opinions and works.

The services of Comenius to pedagogy were of a threefold character, in each of which his merit was very great. 1st. He was the true originator of the principles and methods of the Innovators; 2d. he was a great educational systematist ; and 3d. he was the author of improved text-books which were long and widely famous. Let us consider him in each of these aspects.

(1) There is little need to enter into detail upon the pedagogic principles which lie at the foundation of the whole method of Comenius. They are those

which have already been described as common to all the reformers, with their utilitarianism and sense-realism strongly emphasized, and their neglect of imagination easily observable. Indeed he may rightfully be called their originator ; for, although Ratich had preceded him by a few years in the formulation of a portion of these principles, mingled however with vitiating errors, he had forfeited all just claims to priority by his jealous secretiveness, by his treatment of them as a secret nostrum for all educational ills, and by his utter failure to apply them to any practical use. Hence the honors of paternity passed from him to Comenius, who re-discovered them when discredited by failure, who sagaciously discerned their real value and applicability to school uses, and who unselfishly revealed them to the whole world embodied in a practical working scheme.

If to Ratich is due the merit of discerning the necessity and value of an Art of Education, when as yet there was none, to Comenius belongs the honor of reducing this art to somewhat systematic form ; of illustrating its principles, with not a few errors in details, such as are incident to first essays, and which later he acknowledged to be such errors ; and of presenting these principles in a form in which they have since been widely accepted. He freely acknowledges his indebtedness to Bacon, to Vives, and to less known men ; but what he drew from others, he made his own by the way in which he used their hints.

His aim was knowledge, graced by virtue, and

sanctified by piety. For the attainment of this aim in school training he believed in a good method as something absolute, and, in a certain sense mechanical in its character, as leading to surely preconceived results, and one might almost say, as capable of manufacturing men according to a desired pattern. It is easy for us to see that this was to ascribe far too great potency to method and to the art of teaching, and to lay too great a responsibility for results upon teachers; but it was the error of a great originator in the primal enthusiasm of entering on a hitherto untrod-den way.

His root idea was to teach all things first in their simplest elements, and to proceed thence in ever-widening circles; to teach *from* things and not *about* them; to proceed from the relatively simple to the more complex, from particulars to the general, from the concrete to the abstract, from the vaguely known to the definitely apprehended, advancing ever step by step and by insensible degrees. He would have all things presented to the senses, and to as many senses as possible. This is his Sense-Realism. He insists on the immediate *use* of all things that are learned, and upon their *repeated* use, till they shape themselves into mental habits and develop into *faculty*. These are the best features of what we of the present day know as Pestalozzianism.

A pronounced utilitarian in education, always however in accordance with his aim as before stated, he declares himself emphatically opposed to teaching

what is useless or too special, a declaration of which there was but too much need in his day, and which may possibly deserve to be borne in mind in all ages. He required that all explanations should be made clear as light, and that they should be proved to have been clear by the pupil's ability to use what had been explained. Finally, he demands that all subjects should be proportioned to the age and *capacity* of pupils.

To prove the conformity of his principles of method to nature, he is over-fond of appealing to analogies from external nature, and too frequently these analogies are whimsical even to absurdity, especially in the consequences sought to be derived from them. For these, if any one is curious enough to note the vagaries of a great mind, misapprehending the true meaning of conformity to nature and of the sort of nature to which we should conform, it will be easy to refer to Prof. Laurie's Life and Educational Works of Comenius pp. 84-98, where they will be found in abundance, as examples of his syncretic method.

In what has here been said, I think has been presented a brief but fair sketch of the great merits of his method. His plan of organization, and his famous books, we will now consider.

We have already seen that Sturm had proposed a comprehensive and systematic organization for a secondary school with a graded series of studies extending over ten years; and that several of the German states had in the 16th century, placed below their six-class Latin schools, also German schools in which

should be taught the necessary elements of knowledge in the mother-tongue. It remained that some one should prepare a general scheme of organization, comprehending all the years of instruction, setting to each its limits, and assigning to each its appropriate functions. This Comenius undertook with such success that his scheme corresponds remarkably in general features with our modern school organizations. He proposed to divide the years of pupilage from birth to the age of twenty-four, into four equal periods, each of six years, and stated distinctly the part which each should perform in the work of developing progressively the powers of the child and youth.

Up to the age of six, he would have all children trained at home or in maternal schools, in which the easy beginnings of all knowledge were to be imparted, and the precious germs of correct personal and moral habits were to be implanted, by lessons on objects and pictures, and by direction in the observation of common phenomena. The amount of time which Comenius assigned to this early training is now adopted, as is also the general subject-matter, which has been ingeniously wrought up into systematic form during the present century by Froebel and his followers; but the idea which Comenius entertained, of expecting this instruction from the mothers of families, and in which he was seconded by Pestalozzi one hundred and fifty years later, has been found wholly impracticable, as might have been anticipated by anyone who knew the condition of the vast majority of

mothers, especially among the poorer working classes, and the various distracting demands that are made upon their attention, even in more favored families. Hence this highly important training is now being assigned during its last three years to regular schools called Kindergartens, or Infant schools, with results which wholly justify the emphasis that Comenius laid on the right direction of infant efforts and activities.

From the age of six to twelve, Comenius proposed national schools for all children, girls as well as boys. These were to be schools wholly devoted to the mother tongue, for which he gives weighty reasons, though he would permit some modern language to be taught and learned by its use in the later years. He doubtless saw that this permission was little likely to be used save in the border lands where two different languages were in close proximity. The studies in these national schools were to be, reading, writing, and reckoning, drawing, measuring, and some *handicrafts*,—geography, history, Bible history, and singing. Comenius proposed that each class should have a lesson book containing *all* that it was to learn in these subjects, as well as in morals and religion,—an expedient which has not commended itself to the experience of succeeding times. The worthy purpose which it may have had in view, of avoiding the expense of many books, is now attained in German elementary schools by the use of inexpensive outlines on which is based a large amount of oral instruction.

and practice.* Thus the spirit, though not the form of the recommendation of Comenius, has been preserved.

The *intellectual aim* proposed for the national schools, was to train the senses and the memory, the tongue and the *hand* of all children, that they might learn all those things which have to do with the usual affairs of life, and which hence would always be useful for all, whatever might be their future calling. The training of the hand in mechanical dexterities he desires, not only "that boys may understand the affairs of ordinary life," but "that opportunities may thus be given to them to find out their special aptitudes." The bearing of this on recent efforts for manual training will be obvious, showing Comenius as a pioneer in this effort. The school hours for the national schools, Comenius would make, two hours in the morning for the understanding and the memory, and two in the afternoon for the hand and the voice and for repetitions, transcriptions, and competitions in the various school exercises, an allotment of time which has usually been very considerably exceeded save in the lowest grades.

The Latin school or gymnasium which was to receive boys of ages from twelve to eighteen, Comenius proposed to have established in every province or considerable town ; and its aim should be, besides moral and religious instruction which are always to

* For example a set of these outlines now before me (*Leitfaden*) for the grammar instruction during five years of the citizen schools, cost all together twenty-four cents.

be prominent objects, to train the *understanding* and the *judgment* of those who are destined to something higher than commercial and manual pursuits.

In this, the course is to be encyclopædic, including four languages, viz., the vernacular, Latin, Greek, and Hebrew, and besides these, the cycle of sciences then known, among which history, "the eye of life," was emphasized as to be studied during the entire six years in small text-books.

Comenius does not expect that a complete knowledge of any subject will be gained in the Latin school, but only that "a sure foundation shall be laid in each for future acquirements." The same allotment of school hours is recommended for the gymnasium as for the national school, and a like assignment of the more difficult subjects to the morning hours, while the afternoons are set apart for history, repetitions, and writing. The gymnasium was to be divided into six classes, and these were to be so named as to indicate the order in which subjects should be begun; the 1st to be called grammar, the 2d physics, the 3d mathematics—physics to precede mathematics as being less abstract—the 4th ethics, the 5th dialectics or logic, and the 6th rhetoric. The reasons for this order of arrangement on pedagogic grounds Comenius gives in his *Magna Didactica*.

For the period from the age of eighteen to that of twenty-four, Comenius proposed that there should be established an *academia*, i. e., university in every country or large province, to which should be sent

only the élite youth selected for their talent through a public examination by the rectors of the schools, and in which should be retained only those who approved themselves both capable and industrious. The aim of the university should be to train the future teachers, and the leaders of nations in thought and action. In it, all sciences should be taught, from which students should select as specialties those for which they have the greatest taste; while at the same time he would have systematized summaries prepared, both as introductions to the several specialties, and as enabling those who devote themselves to some one specialty to gain some idea of its relations to other departments of human interest,—a useful purpose if properly carried out. He likewise prescribes afternoon conferences of professors with students to clear up misunderstandings, doubts, or seeming contradictions; and he suggests the form of the final examinations, that “no one may be crowned without victory.”

Finally Comenius suggests that there be somewhere a Schola Scholarum for the purpose of original researches that should advance all sciences, make discoveries, and in general “be to the rest of the schools what the stomach is to the body,—the living workshop, supplying sap, life, and strength.” It may be said that the German universities as now conducted, perform the important functions of both university and place of research, as conceived by Comenius; but they leave the weak and indolent students to eliminate themselves by the action of examinations.

The text-books of Comenius all reveal his pan-sophic and utilitarian ideas in their subject-matter, since they grasp after *useful* knowledge, and strive to give a taste of *all* useful things. In the selection, gradation, and arrangement of their matter, they are intended to exemplify his principles of method. In this they are not entirely successful, since, as he later confessed, they are too condensed, attempt too much, and as we shall presently see, expect of the pupil more than can be accomplished ; as, for example, one of them has somewhat more than 8,000 Latin words which pupils are expected to master. These faults of detail he acknowledges to be due to his neglect of his own principles.

These text-books were all intended to aid in the mastery of Latin together with the mastery of things useful to be known. They make the innovation, however, of basing the instruction in Latin on the vernacular and on *things*. Comenius regards the Latin merely as a means needful to arrive at the knowledge of things useful to be known, and not at all as a discipline of the powers, nor as a preliminary to the classic literature, some of which he considered useless, and some as unfit matter for the education of Christian youth. His text-books were hence intended to supersede these useless or pernicious works in school instruction, in which object they utterly failed, though their extended and long-continued use in the schools, indicates that they were found to be a great aid in acquiring Latin. These books, named not in the order

of their publication, but in that in which they prepare each for the next, are (1) the *Orbis Pictus*, (2) the *Vestibulum*, (3) the *Janua*, and (4) the *Atrium*: in addition to which the author intended to prepare a Palace of Authors. Of these the *Orbis Pictus* and the *Janua* were far the most famous, and of both these I have copies before me: the others I have not seen, and must rely on others for the brief mention that I make of them.

(1) The *Orbis Pictus* or *World Displayed*, is justly famous as the first *illustrated* school-book that was ever published, and is the most striking example of its author's leading principle, to appeal in all possible cases directly to the senses of the pupil. Indeed, in the preface to it, he says: "Now there is nothing in the understanding which was not before in the sense. And therefore to exercise the senses well in rightly perceiving the differences of things, will be to lay the grounds for all wisdom, and all right discourse, and all discreet action in one's course of life." In harmony with this idea, Comenius presents the child with a series of 151 pictures, ranging over the entire circle of the knowable. The parts of the pictures are numbered to correspond with their names as they occur in brief descriptions, which are given in both Latin and the vernacular placed opposite to each other in columns, that the one may be explained by the other. All these pictures are quaint, and some of them in a high degree curious, for example, the attempt to portray the wind in No. 6, the soul in No.

43, God's Providence in No. 149, and the Last Judgment in No. 150. This book, published in 1657, was the next year translated into English by Charles Hoole, a London schoolmaster, with a preface addressed "to all judicious and industrious schoolmasters; and it is a reprint of this translation that I have now before me. This book went through many editions, had an enormous sale, and was long in use. It was probably one of the most popular text-books ever written.

(2) The *Vestibulum* or porch to the Latin tongue, contains 1,000 Latin words, embodied in 427 sentences, and divided into seven chapters. The German and Latin are given in parallel columns, the German to be read first and then its Latin equivalent. Along with this reading, is required a progressive mastery of the inflected forms from appended tables of declensions and conjugations. This Latin primer was expected to be studied through several times, and then to be committed to memory. The index at the end of the book was intended to test the pupils' memory of the sentences in which the words occur. With this as a preparation, the boy might pass on to the *Janua*.

(3) The *Janua Aurea Linguarum Reserata*, or golden door of languages swung open, contains 1,000 sentences, ranging from those somewhat brief and simple at first, to those of considerable length and complexity towards the end. These sentences are grouped in 100 sections, treating each some phase of useful knowledge, the whole field of which they are

intended to cover. They contain no fewer than 8,000 Latin words. The vernacular translation through whose aid the Latin is to be learned, is in parallel columns answering to the Latin, and one copy that I have, published in 1676, is adapted for study in either German, French, or Italian, two pages opposite each other being used as one to accommodate the necessary four columns. For each of the languages used there is an alphabetical index of words at the end; but there is no lexicon, the intention being that the Latin should be learned from its correspondence with the mother-tongue; for Comenius was of the opinion that pupils should make their lexicon for themselves by comparison of Latin usage with their own.

It will be needless to more than allude to an edition of this famous work published about 1654, to which its author prefixed a lexicon in Latin—Latin to be *first memorized*, followed by a grammar, also in Latin, to be mastered before proceeding to the Janua itself accompanied by no vernacular. I mention it merely to show how completely a great reformer of method may abandon most of his fundamental principles, when completely possessed with some other idea, like that of treating all kinds of useful knowledge of things, which was the hobby of Comenius. This edition evidently met with little acceptance, for the quadrilingual edition of 1676, shortly after the death of Comenius, is on the original plan of the Janua.

This book had an enormous success. It was translated into twelve European languages, and some of

the Oriental ones. The Elzevir edition of 1642, which I have, makes Greek take the place of the vernacular; and the quadrilingual edition accounts for three of the European tongues. This book, like the others that have been described, was intended to be perused ten times, with much writing. No one need therefore to doubt that Comenius believed in *repetition* as the corner-stone of thoroughness.

(4) Of the Atrium no more need be said than this, that it was a much-expanded Janua, with the same number of chapters, but with the sentences expanded to paragraphs, thus widening the circle of knowledge of the same subjects; that it contained a Latin grammar written in Latin, introducing the idioms and elegances of the language; and that it was intended to lead up to a Palace of Authors which was never prepared.

As a whole, these treatises are progressive in character, in spite of their faults in matters of detail. They serve also as an excellent illustration of the third of the obstacles to the progress of educational reform mentioned in a previous chapter, that, namely, which springs from the impossibility that the reformer himself should so entirely free himself from early prepossessions, as not to permit them somewhat to interfere with his settled principles of later date.

The *Magna Didactica* is the great work in which Comenius has set forth his principles of education, and his theoretic application of them to methods of instruction and organization. What is needful to our

purpose in these regards has already been given. It remains only to speak of his ideas of discipline. This he thought should be wholly mild and kindly, and that adherence to his system would render all severity needless. For the child, he reasoned, who was not forced to study but allureed to it, by kind and cheerful treatment, by promotions and prizes, by using and seeing the utility of all he learns, by an easy and orderly procedure from perception of things to ideas and words which he remembers because he first understands them, and by feeling in himself a growth of insight and a development of the power to judge rightly,—would be little likely to need severe discipline. In this idea Comenius was doubtless right, as the best modern school practice abundantly proves.

To those who desire a more complete knowledge of the life and works of this greatest and most original of the Innovators, his life by Prof. Laurie, containing an analysis of his works can be confidently recommended. American educators owe to Mr. C. W. Bardeen an excellent reprint of the *Orbis Pictus*. Copies of the *Janua* are not impossible to be obtained through dealers in German books. For those who read German, a good translation of the *Magna Didactica* is published in Leipsic, and to this is prefixed an excellent biography of Comenius and an analytic statement of the pedagogical doctrines of the work. Its German title is “*Comenius, Grosse Unterrichts-lehre.*”

In the introduction to this, the editor adduces facts.

to prove that this work, published first in Bohemian and later in Latin, was little known during the 17th century.

The Port Royalists.

The teaching community of Port Royal, in the opinion of French pedagogic writers, exerted a far more pervasive and lasting influence on education in France than would naturally be expected from the smallness of the circle in which it acted, or the brevity of the time during which its schools continued. The *little schools* as they were called, started into being in 1643, apparently as a protest against the evil moral tendency of the Jesuits; and they were suppressed through the machinations of the Jesuits in 1660, after an existence of barely seventeen years. To what then is the continuance of their influence to be ascribed? In part, I think, to the great literary activity of some of the lay brothers, who wrote, besides some pedagogic treatises, several approved text-books, long current under the name of Port Royal books; in part also because they were the French representatives of some highly important principles of the educational reformers, which through them and their books became known and influential.

Thus they numbered among them Nicole who wrote a treatise on the education of a prince, in which he recommends an appeal to the *senses* in instruction wherever possible, that difficulties be proportioned to the growing powers of the young, and that in the education of the great, chief stress be laid

on the heart and the morals, rather than on acquired knowledge ; Coustel, who wrote a work entitled, "Rules of Education for Children;" Lancelot, who wrote the methods of Port Royal for teaching Latin, Greek, Italian, and Spanish, and also a catalogue of the root words of Greek, with the inviting title "Garden of Greek Roots;" and Arnauld, celebrated for his controversy with the Jesuits, who aided in writing the Elements of Geometry, the Port Royal Logic or art of thinking, and a "General Grammar," in which the universal laws of language are sought in the *reason* common to human beings. These various works of the Port Royalists became widely known and esteemed, and perpetuated their influence long after their schools were disbanded.

In the line of reform, one of their great merits was the stress which they laid on the vernacular. In that age the mother tongues received little attention, as we have seen ; yet the Port Royalists made French the basis of all instruction. Whereas Latin grammar was usually taught in Latin, "the unknown by the unintelligible," as Prof. Compayre wittily remarks, they prepared in French not only a Latin grammar, but likewise grammars for the Greek and some modern languages. Pupils were also taught to compose in French at an early age on subjects suited to their powers, and this work in composition was directed to the training of *judgment* as well as to the attainment of skill.

In language study they greatly simplified and

abridged definitions and rules ; they impressed the meaning of rules by their immediate use in the reading of authors ; they made the most important parts prominent by such expedients, not then common, as differences of type ; they protested against the abuse of *written themes*, demanding that the most time be given to the explication of authors, of which they made rather an exercise of judgment than, like the Jesuits, a study of words, making also the translation into Latin more an oral than a written exercise, while verse making was entirely optional ; instead of giving colorless extracts from authors, like the Jesuits, they preferred entire works of Latin authors ; and they taught Greek to the pupil through the medium of his own language instead of through Latin, as was usual. Compayre thinks their unquestionable superiority is as teachers of humanistic studies ; yet humanities with them were not humanities of mere *form* as with the Jesuits, but of *judgment* leading to a sound use of reason and to an upright conscience.

Burnier, quoted by Compayre, thus sums up the pedagogic principles and merits of Port Royal : "It simplified study, without taking from it its wholesome difficulties : it strove to make study interesting, while not converting it into a puerile play : it caused to be committed to memory only that which had first been grasped by the intelligence : it admitted only perfectly clear and distinct ideas, few precepts and many exercises on them, the knowledge of *things* and not merely that of words ; in short, the real develop-

ment of thought and of the faculties of the soul by means of study." So far their ideas and methods seem identical with those of the reformers, from whom however they differed widely by the light esteem in which they held positive knowledge; since, in the words of Nicole, they valued "the sciences only as an instrument to perfect reason."

Their discipline was mild and kindly considerate, but with a tone of gravity in it akin to ascetic gloom. They eschewed any resort to praise and emulation as tending to arouse pride and self-satisfaction. Their motto "to speak little, endure much, and to pray still more," shows how entirely they relied on the aid of God and on the prayers addressed to Him for the success of their work. They had "a deep distrust of human nature," which was shown by the check which they put on the formation of friendships among the boys. "Pious practices they held in honor, yet they subordinated them to the reality of inward sentiment; hence they *advised* devotion, but did not *impose* it." "Above all they manifested the profound and unwearying devotion of Christian souls who give themselves wholly and without reserve to other souls to elevate them, but injured and marred by a shade of rigidity and mysticism."

Such was this small and short-lived, yet largely influential teaching congregation; exemplifying in their own way and coloring with their own spirit, some of the most far-reaching principles of the educational reformers; and uttering a courageous protest, in a

gainsaying age, against the spirit, the methods, and the tendencies of the Jesuits, their crafty co-religionists. Suspected, coerced, and finally silenced, their methods and the best features of their spirit survived them, and in the next age took the form of the wise Rollin ; and their protest against the Jesuitic spirit in education, through the letters of Pascal, gathered force ultimately to overthrow temporarily those by whom they had been overthrown.

John Milton, 1608-1674.

We have seen in the 16th century, how weighty contributions to pedagogical literature we owe to English teachers like Ascham and Mulcaster. In the 17th century England can point with pride, not merely to the powerful though indirect influence on education of Sir Francis Bacon, but also to noteworthy thoughts on education from her greatest poet, and from one of her most renowned philosophers, Milton and Locke.

John Milton, best known for the past two centuries as a great poet, was chiefly distinguished in his own time for the vastness, variety, and elegance of his scholarship, for his vigor and ferocity in politico-theological controversy, and for the austerity of his republican principles. He is of interest to us here only as a skilful and successful schoolmaster, and as the author of a brief but significant treatise on education. The story of his life belongs to literary history, and has been told by Dr. Johnson in his "Lives of the

Poets," with that bitterness of personal prejudice from which that remarkable man could never wholly abstain when occasion offered, and for which, to this stanch royalist and high churchman, the career of Milton presented abundant opportunity. Hence Johnson cannot refrain from "some degree of merriment" on the poet's career as a master of a boys' boarding school, which however, with an air of magnanimity, he conceded that "no wise man will consider as in itself disgraceful;" yet he contrasts satirically his ardor in hastening home from his travels when he heard that England was on the verge of a civil war, with the peaceful and humble employment in which he at once engaged. It is not wholly impossible that the poet who penned in one of his sonnets the noble line,

"He also serves who only stands and waits,"

may have seen that the most effective way in which he could serve his native land in her trouble was by aiding to train her youth for a better destiny.

Johnson writes, "It is said that in the art of education he performed wonders, and a formidable list is given of the authors, Greek and Latin, that were read in his school by youth between ten and fifteen or sixteen;" but he expresses his incredulity in these words: "Those who tell or receive these stories should consider that nobody can be taught faster than he can learn. The speed of the horseman is limited by the power of the horse. Every man that has ever undertaken to instruct others, can tell what slow advances

he has been able to make, and how much patience it requires to recall vagrant inattention, to stimulate sluggish indifference, and to rectify absurd misapprehension." The worthy doctor here speaks doubtless from a bitter recollection of his own unhappy experience as a schoolmaster.

It was during the years that he devoted to teaching and at the age of thirty-six that he wrote the little essay on education with which this sketch has to deal. At a later period of his life, after he had held considerable public employments, and while engaged in writing *Paradise Lost*, he showed his passion for his former vocation, by writing an elementary Latin method, descending, as Johnson pompously says, "from his elevation to rescue children from the perplexities of grammatical confusion, and the trouble of lessons unnecessarily repeated."

In his tractate on education which is in the form of a letter to Samuel Hartlib, a learned Polish-Prussian merchant then residing in England, and a friend of Comenius, the great poet declares that he has thought much and long on a reform of education as a matter of quite vital moment. In his view, the aim of education is "to regain to know God aright." "But because our understanding cannot, in this body, found itself but upon *sensible things*, nor arrive so clearly to the knowledge of God and things invisible, as by *orderly conning* on the visible and inferior creature, the same method is *necessarily* to be followed in all discreet teaching."

This sentence condenses in itself a whole chapter of pedagogic psychology; and both in this and the entire spirit of his treatise, Milton shows himself in entire accord with the fundamental ideas of Montaigne and Comenius, alluding indeed to the *Didactica*, and the *Janua* as books with which he is acquainted. Like them he emphasizes the need of basing the work of education on knowledge of sensible things, and insists upon exact and orderly observation of external things as "the method necessarily to be followed in all discreet teaching." Like them, he lays great stress on experience and on immediate application of what has been learned. His ideas, too, like theirs, as to the subject-matter of education, are what many in these days are apt to stigmatize as utilitarian, as though things useful to be known, should on that account be regarded with suspicion as pabulum for the youthful intelligence. He differs widely from them in some points; and wherein they differ, his scheme is doubtless less practicable than that of Comenius; or, as he says himself, "I believe that this is not a bow for every man to shoot in that counts himself a teacher, but will require sinews almost equal to those which Homer gave Ulysses." Yet all these illustrious men, amid their differences in plans for accomplishing their common objects, have still the same great objects in view, viz., so to reform education as to restore sense-activity and experience to their proper and fundamental place in instruction, to cultivate the understanding more while cramming memory less,

and to confine the subjects of instruction closely to those matters which will best fit the future man to perform well his duties as a citizen and a Christian.

Milton's definition of education is justly famous for its force and elegance of expression : "I call therefore a complete and generous education, that which fits a man to perform justly, skilfully, and magnanimously all the offices, both private and public, of peace and war." As a prelude to this, he arraigns "the usual method of teaching arts as an old error of the universities, not yet well recovered from the scholastic grossness of barbarous ages, that instead of beginning with arts most easy,—and those be such as are most obvious to the sense,—they present their young novices at first coming with the most intellective abstractions of logic and metaphysics," so that "for the most part they grow into hatred and contempt of learning."

To this perverted teaching, Milton attributes the fact that when young men so bred enter on life, some betake themselves "to an ambitious and mercenary or ignorantly zealous divinity ;" some are "allured to the trade of law" with no higher aim than "fat contentions and flowing fees ;" others engage in "state affairs with souls so unprincipled in virtue and true generous breeding, that flattery and court shifts, and tyrannous aphorisms appear to them the highest points of wisdom ;" and still others are content to lead a life of mere luxury and sensuous enjoyment. The scheme of education, then, that he would arrange

was intended to rescue youth from careers so mean and inglorious, and to put them upon the attainment of the lofty ends that he proposes in his definition, by a way laborious indeed, yet withal so alluring that he believes there would be more difficulty in driving from it the dullest and most indolent, "than we now have to hale and drag our choicest and hopefulllest wits to that asinine feast of sow thistles and brambles which is commonly set before them."

Milton concedes the necessity of learning languages, because the knowledge and experience of individual nations is incomplete, yet he insists that "language is but the instrument conveying to us things useful to be known." Hence he blames the schools for wasting seven or eight years "in scraping together so much miserable Latin and Greek as might be learned easily and delightfully in one year." This loss of time he attributes partly to too frequent vacations, but mostly to a "preposterous exactation, forcing the empty wits of children to compose verses, themes, and orations which are the acts of ripest judgment and the final work of a head filled by long reading and observing with elegant maxims and copious invention." The practice which he denounces as preposterous has, however, proved very tenacious of life, continuing far into the present century, and being by no means extinct in the native land of Milton. Having therefore no opinion of the value of the ancient languages as a mental gymnastic, he would have them learned by the most compendious means possible, with only

the most essential parts of grammar thoroughly practised in some good short book, that they might quickly be used as a medium through which "to learn the substance of good things and arts in due order."

Between the ages of twelve and twenty-one, Milton expects boys to master all good authors in Latin and Greek, together with Hebrew for purposes of scripture study, whereto he thinks, "it would be no impossibility to add the Chaldee and the Syrian dialect," with the Italian, as he naively adds, at any odd hours. This however is only language as a means of conveying to the boys things useful to be known. Through these his boys are to master "the rules of arithmetic, and soon after the elements of geometry even playing as the old manner was," likewise geography and astronomy, the easy grounds of religion and scripture history, agriculture from classical authors, "that they may improve the tillage of their country," natural history from the same sources, trigonometry with its applications in engineering and navigation, the elements of medicine, the essentials of rhetoric, logic, ethics, and poetry, and also politics that they may "know the beginning, end, and reasons of political societies."

After this the boy is to dive into the grounds of law from Moses and Lycurgus and Justinian "down to the Saxon and common laws of England and the statutes." "These," he says, "are the studies wherein our noble and our gentle youth ought to bestow their time in a disciplinary way from twelve to one and

twenty,”—at convenient times for memory’s sake reviewing and systematizing all, “until they have confirmed and solidly united the whole body of their perfected knowledge like the last embattling of a Roman legion.” The relationship of this scheme of studies with the pansophic ideas of Comenius, is somewhat striking.

We may well pause here to inquire with Milton, “what exercises and recreations may best agree with and become these studies ;” for young fellows fed on so full and sturdy an intellectual diet would be quite sure to need exercise. For an hour and a half before their noontide meal, the recreations are to be of a martial character, a training in the use of all kinds of weapons and in wrestling, “as need may be often in fight to tug or grapple and to close.” Then whilst resting before meat, their spirits are to be composed by “the solemn and divine harmonies of music,” to which, like Plato and Aristotle, he ascribes “a great power over dispositions and manners.” Then again about two hours before supper, the boys are to be summoned to warlike evolutions, first on foot, then as age permits on horseback, and finally in “all the helps of ancient and modern stratagems, tactics, and warlike maxims.”

He expects from this that boys will go from his school fitted to command armies with more than usual credit, as the result of those physical exercises by which their bodies are enabled to endure the herculean labors which his required studies impose. Besides

these regular exercises in the school, he provides for the older boys another recreation, in which, ever thrifty in the use of time, he proposes to combine long excursions on horseback in the spring with a pleasant mode of gaining knowledge of their own country and its resources, by "observing all places of strength, all commodities of building and of soil for towns and tillage, harbors and ports of trade," and with these, some idea of naval affairs, "of sailing and of sea fights."

Finally when his admirable Crichton shall have gained all knowledge, wisdom, and virtue, as well from observation and experience as from converse through books with all that has been worthily said or done by great men in ages past, Milton permits him at the age of three or four and twenty to see other countries, "not to learn principles, but to enlarge experience, and make wise observations." It will be seen therefore that while Milton agrees with Montaigne in thinking foreign travel beneficial, he differs from him both as to its time, and the purpose that it should subserve. Montaigne would have the boy visit foreign lands while young and with a judicious tutor, that he may learn their languages by use, become acquainted with their manners and modes of life that he may be thus guarded against narrow and provincial ideas and modes of judging, and learn their history on the spot, with what he values more, the ability to judge of histories.

As to the methods by which Milton hopes to achieve

the large results that he expects, it will already have been seen that they contemplate a thorough use of the senses, a guiding of the youth in all possible cases to personal experience and to immediate application in right ways of what he has learned, and the combination of all that has been learned, by a right use of the understanding, into such a systematized body of doctrine as may justly be termed wisdom.

For the motive power that shall prompt boys to undertake and continue such labors, he looks chiefly to the example of teachers, which "might in a short space gain them to an incredible diligence and courage, infusing into their young breasts an ingenuous and noble ardor." He expects much also from "such lectures and explanations upon every opportunity as may lead and draw them in willing obedience, inflamed with a study of learning and the admiration of virtue, so stirred up with high hopes of living to be brave men and worthy patriots, dear to God and famous to all ages, that they may despise and scorn all their childish and ill-taught qualities to delight in manly and liberal exercises."

Now as regards the motives on which Milton relies, love of knowledge, and a high-toned ambition to excel, though they are of the most enduring influence when once thoroughly roused, it may be doubted by some teachers whether they are not directed to ends somewhat too remote to be influential with the ordinary run of boys in a considerable school. Doubtless, by good precepts, effectively expressed, given on aptly-

chosen occasions, not weakened by too frequent repetition, and best of all, enforced and illustrated by the consistent example of respected teachers, such high motives may be awakened and kept active in the more finely endowed boys, prompting them "to scorn delights and live laborious days ;" and thus a powerful public sentiment may be fostered in a school which will stir even the coarser and ruder natures. Hence if Milton's ideas in this regard bear the same heroic stamp as his scheme of studies, they are none the less worthy of the most attentive consideration of all conscientious teachers who are intent to educate as well as to instruct, and to educate by instructing.

It remains only to be said that Milton's so comprehensive and useful scheme of studies, proposed for so lofty aims, and inspired by such high motives, was intended to be carried out in schools, each for one hundred and thirty boys, who were to be lodged in fair houses enclosed in spacious grounds ; and that it was meant to supersede both the English public schools and the universities for whose "asinine feast of sow thistles and brambles" he expresses so hearty a contempt.

In the great lines on which he would carry out the reforms which he thinks needful in the schools, he is obviously in full sympathy with the leading principles of the educational Reformers ; whilst by the demands that he makes on the *personality* of the teacher both as example and as guide in the strenuous exertion of every power, he dignifies his calling to a degree which

has come to be generally admitted only in much more recent times.

John Locke, 1632-1704.

John Locke, long celebrated as a philosopher, has an especial claim on the attention of the student of education, because of the wide influence he has exerted on educational history through his "Thoughts Concerning Education," and, in a much smaller degree, by his essay on Studies. Curiously enough, his ideas have been much less influential among his own countrymen than on the continent of Europe. Until a comparatively recent period, the typical English schoolmaster has shown little interest in educational theories and problems, so that Locke's ideas on education were long better known in France and Germany than in England. In France, especially, he inspired Rousseau with nearly every valuable thought which appears in the brilliant pages of his *Emile*. He seems himself to have derived some of his most characteristic ideas from Montaigne and possibly also from Rabelais, as will be apparent in the analytic examination of his chief educational work.

He brought to his task a pedagogic experience gained, not like that of Milton in the management of a considerable number of boys, nor like that of Comenius in the organization and direction of schools and in the preparation of manuals for youth, but in the direction of the education of a few high-born boys, and in wise and friendly counsels given to people of

distinction who sought his advice in the training of their sons. Possibly from this circumstance he, like Montaigne, favors private education and consequently neglects that of the people, believing, to use his own words, that "that most to be taken care of is the gentleman's calling ; for if those of that rank are by their education once set right, they will quickly bring all the rest into order." It need hardly be shown how inferior is this conception of the sphere of education to that of Luther and Comenius, both of whom believed that to all youth should be given an education befitting their destiny as human beings, instead of leaving their improvement to the chance of influences that might be vouchsafed to them from above.

Moreover the wise foresight of these men in contradistinction to the narrower views of Locke, is being continually emphasized by all the movements of modern civilization.

Still Locke's preference for private and individual education was entirely in harmony with his belief in the decisive effects of early training in shaping the character and destiny of men. At the beginning of his "Thoughts," he says, "Of all the men we meet with, nine parts of ten are what they are, good or evil, useful or not, by their education. 'Tis that which makes the great difference in mankind. The little or almost insensible impressions on our tender infancies have very important and lasting consequences ; and there 'tis as in the fountains of some rivers, where a gentle application of the hand turns

the flexible waters in channels that make them take quite contrary courses, and by this direction given them at first in the source, they receive different tendencies, and arrive at last at very remote and distant places." Now no one can fairly question the great and far-reaching effects on the character of the child due to his early experiences ; and if one fully believed that so large a part as nine-tenths of what men are is due to these early experiences, and so little as one-tenth to innate or inherited dispositions and tendencies, and believed besides, as Locke apparently assumes, that these influential experiences can be satisfactorily *controlled* by a private education, the argument for such education would be very strong.

Yet its strength is rather apparent than real ; for, setting aside the important fact that such separate education would be attainable only by those who are favored by fortune, and who can find paragons for tutors, the general experience of mankind has shown that native tendencies play a much larger part in shaping men's characters than Locke admits in the passage that has been quoted. Indeed, in § 66 of the same work, he forgets consistency, and refutes his earlier over-statement, by saying "God has stamped certain characters on men's minds which like their shapes may perhaps be a little mended, but can hardly be totally altered and transformed into the contrary.—For in many cases all that we can do or should aim at, is to make the best of what nature has given, to prevent the vices and faults to which such a constitu-

tion is most inclined, and give it all the advantages it is capable of."

But besides this stubborn fact of innate dispositions, which causes the best education to expend unavailingly a portion of its force, we should not lose sight of another fact quite as stubborn, which is that not even the wisest man can wholly *control* or even *fore-see* the experiences that may be decisive in shaping the infinitely variable tendencies of the young. The acute Rousseau saw this difficulty, and to avoid it he proposed to isolate his Emile from all human companionship save that of his tutor ; but whilst he would strive thus to eliminate the dangers that spring from the strong social instincts of human beings,—one of the most influential factors in shaping character,—he ignores the fact that man can be fitted for his proper sphere of activity in human society, only by early and habitual intercourse with his fellows. From this intercourse, it is true that he runs a risk of being led astray : without it, it is well-nigh sure that he will be less than a normal man. Hence, despite the weighty opinion of Locke, we may feel reasonably sure that our usual mode of educating youth in the society of their fellows, notwithstanding its seeming risks, is not merely the only practicable one, but is also to be preferred on theoretical grounds to a private education ; even could paragons be always found for tutors.

Montaigne, it will be remembered, lays great stress on the choice of a tutor whom he would wish to be a man "with a strong and well-balanced head rather

than with a very full one," furnished with good manners and a sound understanding rather than with mere book knowledge. Locke emphasizes the character and qualifications of the tutor even more strongly than Montaigne had done. Indeed, after his somewhat discursive fashion, he recurs to this subject again and again, and in the most various connections ; so that to make out the qualities which his ideal tutor must possess, we are obliged to refer often to quite widely-separated sections of his work.

Of his character, he says, "I think this province requires great sobriety, temperance, tenderness, diligence, and discretion, qualities hardly to be found united in persons that are to be had for ordinary salaries, nor easily to be found anywhere. Then too he must be thoroughly well-bred, for "to form a young gentleman, as he should, it is fit his governor should himself be well-bred, understand the ways of carriage and measures of civility in all the variety of persons, times, and places, and keep his pupil, as much as his age requires, constantly to the observation of them." "Besides being well-bred, the tutor should know the ways of the world well ; the ways, the humors, the follies, the cheats, the faults of the age he is fallen into, and particularly of the country he lives in," that he may be able to teach his pupil to steer his course prudently and safely through the devious paths of a deceitful and self-seeking world.

In his instruction, "his great skill is to get and keep the attention of his scholar, making him com-

prehend the usefulness of what he teaches and the added power he thus gets, and making the child sensible that he loves him and desires his good." Finally he "should be one who thinks Latin and language the least part of education ; one who, knowing how much virtue and a well-tempered soul is to be preferred to any sort of learning or language, makes it his chief business to form the mind of his scholar and give that a right disposition ;" and who, to that end, "should have something more in him than Latin, more than even a knowledge in the liberal sciences ; he should be a person of eminent virtue and prudence, and with good sense, have good humor and the skill to carry himself with gravity, ease, and kindness in a constant conversation with his pupil."

From this description of the tutor which has been pieced together from passages scattered here and there as his mode of treatment called for them, it may be seen that Locke has a lofty ideal of the teacher and of his work. He is to be gifted with the finest of human qualities, and in their combination, the rarest ; these are to be adorned by perfect good-breeding, and their usefulness enhanced by a consummate knowledge of the world and of men ; with a sufficient literary and scientific knowledge, he must combine a clear conception of the aims towards which all his educational efforts should steadily tend ; and with all these gifts and acquirements, he must above all be endowed with that rare *tact* and power of *influence* which alone can make all these effective. It

may be said without reservation that the teacher of any age or country may safely make Locke's ideal tutor his model.

Bred a physician, and afflicted during his entire life by feeble health, of which however he took such prudent care as to reach the age of seventy-two, Locke was naturally led to treat with more than usual fulness of the early physical training and care of children, insomuch that some writers on education consider it the chief merit of the "Thoughts" that so great stress is laid on physical education. Still we may without loss give this portion of his work a somewhat cursory attention, especially as the author has given an admirable condensation of his views, as follows: "What concerns the body and health, reduces itself to these few and easily observable rules: plenty of open air, exercise, and sleep, plain diet, no wine or strong drink, and very little or no physic, not too warm and straight clothing, especially the head and feet kept cold, and the feet often used to cold water and exposed to wet." Of these rules, probably none would now be objected to save the one to keep the feet cold and exposed to wet, and the method by which Locke would secure it, by having children wear thin and leaky shoes.

His remarks on diet are excellent; yet it seems strange to modern ideas, that while admitting most ripe fruits into his dietary, he should class peaches and grapes with melons and most plums, as articles to be rigidly excluded. His moderate and sensible ad-

vice to avoid all medicine, and physicians as well, save in cases of imminent necessity, seems to have given to Rousseau the hint on which, in two passages of his *Emile*, he writes a violent and whimsical tirade against physicians and their art, a tirade which it is said he had later the grace to regret, but not to correct.

Coming now to what in the narrower sense we consider education, Locke § 134 states its purposes, and what in his view should be their relative rank, as 1st, virtue ; 2d, wisdom ; 3d, good-breeding, and 4th and last, learning.

By virtue, he means not only religion with its attendant truthfulness, founded on "a true notion of God," which in his view, "ought very early to be imprinted on the child's mind," but also self-control, self-denial to which the child is to be early habituated ; and in general, "a well-tempered soul which is to be preferred to any sort of learning."

Wisdom he defines § 140, as a blending of prudence, foresight, knowledge of the world, and ability in affairs, with an aversion to mere cunning. To lead a child to wisdom, he believes we must begin by making him averse to trickiness as in itself shallow and contemptible, and leading soon to distrust and contempt. When this is duly impressed, he thinks that "to accustom a child to have true notions of things and not to be satisfied till he has them, to raise his mind to great and worthy thoughts, and to keep him at a distance from falsehood, and cunning, which has always a broad mixture of falsehood in it, is the fittest

preparation of a child for wisdom." The rest which can come only from time, experience, and observation, can be aided only by accustoming youth "to truth and sincerity, to a submission to reason, and as much as may be to reflection on their own actions."

In this moral training of the young, as in all other parts of their education, Locke strenuously objects to frequent resorts to the rod as usually "a passionate tyranny over them—putting their bodies in pain without doing their minds any good." In place of blows and passionate chidings, and even of finely phrased precepts oft repeated, he would rely, like Aristotle, on good example and early habituation. "Pray remember," he says, "children are not to be taught (conduct) by rules which will be always slipping out of their memories. What you think necessary for them to do, settle in them by an indispensable *practice* as often as the occasion returns, and if it be possible, make occasions. This will beget habits in them, which being once established, operate of themselves easily and naturally without the assistance of memory." He sees also that to secure this moral habituation so essential to true wisdom, the child must from the outset be accustomed to implicit obedience to rightful authority. Of this he says, § 36, "He that is not used to submit his will to the reason of others when he is young will scarce hearken or submit to his own reason when he is of an age to make use of it; and what kind of a man such a one is likely to prove is easy to foresee."

On good breeding, Locke treats at considerable length, commenting wisely and wittily on the most common modes in which it is violated, and emphasizing the necessity of securing it by a combination of good example and early and constant habituation, with an *inbred* regard for the rights and feelings of others. His golden rule for good breeding is, "not to think meanly of ourselves, and not to think meanly of others."

Locke anticipates the surprise likely to be caused by his placing learning last in a treatise on education, and by his insisting that it is the least part. He justifies it in this way. "I imagine you would think him a very foolish fellow that should not value a virtuous or a wise man infinitely before a great scholar. Not but that I think learning a great help to both in well-disposed minds; but yet it must be confessed also that in others not so disposed, it helps them only to be the more foolish or worse men.—Learning must be had, but in the second place, as subservient only to greater qualities." His order of estimation is therefore first character with that which may add effectiveness to character, and afterwards knowledge,—an order which in too many cases tends to be reversed in modern practice.

He strikes the key note of the subjects that he would have taught to youth in a paragraph which occurs in his discussion of the recreations in which the young should be encouraged to engage. "In all the parts of education, most time and application is to be

bestowed on that which is like to be of greatest consequence and frequentest use in the ordinary course and occurrences of that life the young man is destined for." With this principle all parts of his scheme of studies agree. Thus he lays great stress on careful instruction in one's native tongue. Grammar should be learned "amongst the other aids of speaking well," but it should be the grammar of the youth's vernacular, and its study should be limited to those only who would take pains in cultivating their style. Rhetoric he holds in low esteem as of little use for the purpose for which it is taught, which purpose he thinks may be better attained by exercise on familiar topics according to good models; and in § 189 he proposes a scheme for teaching composition which smacks strongly of Quintilian. Of logic as the art of reasoning rightly, he thinks even more lightly than of rhetoric: "Truth," he says, "is to be found and supported by a mature and due consideration of things themselves, and not by artificial turns and ways of arguing."

Latin he regards as absolutely necessary for a gentleman; but he would have this or any other needful language taught by the briefest possible way, and wherever practicable, by speaking it, which is, he says, "the true and genuine way," an idea in which he agrees with Montaigne. Where this mode is impracticable, he would have Latin taught by interlinear translations of easy authors, followed by easy books with English translations. Thus Locke appears to be

the responsible suggester of the modern practice called *Bohning*, as also of the once famous “Hamiltonian system” of learning languages.

In the early stages of language instruction he thinks grammar needs no attention save what is necessary to master the inflected forms. If grammar is taught at all, it should be to one that can use the language already. “How else can he be taught the grammar of it,” cries Locke triumphantly. Like Milton, he condemns the writing of Latin themes and Latin verses, the latter however for a quite different reason from any that Milton would have urged: he discourages poetry as well as versification in any language, because, as he pithily expresses it, “Parnassus is a pleasant air but a barren soil.”

Of other studies, he would have geography on the globes early begun, and also arithmetic by daily practice in reckoning, to be followed by astronomy according to the Copernican system. He would have chronology go hand in hand with geography that the two may introduce to history “which is the great mistress of prudence and civil knowledge,—and is the proper study of a gentleman or man of business.” Law and the constitutional history of one’s own country, he agrees with Milton in deeming indispensable; and the enlightened men of all countries seem to be coming to a modified form of this opinion. Geometry should be taught as far as the first six books of Euclid; and some good short history of the Bible should precede physics as an *antidote to materialism*.

Of natural philosophy, however, he says, "I think I have reason to say we never shall be able to make a science of it. The works of nature are contrived by a wisdom and operate by ways too far surpassing our faculties to discover or capacities to conceive, for us ever to be able to reduce them to a science" § 190. Now at the close of the second century since this opinion was recorded by the most sagacious and instructed philosopher of his age, this once impossible science leads all others in the importance and brilliancy of its revelations; and, not content with ransacking the mysteries of the earth, with no irreverent hand, it assails the heavens, makes the lightning its useful servant, and careers on the wings of light to the remotest confines of the universe itself.

Finally Locke follows Comenius and Sir Wm. Petty* in advocacy of the training of the hand, by impressing at considerable length the importance that every man should learn some trade, and even giving a list of those trades that he would have taught, anticipating in this a number of those that are proposed in our own days. In this we shall see that Rousseau copies him, and urges the idea with so much eloquence that the learning of some trade becomes fashionable in France; and even the king, the unhappy Louis XVI., becomes a skilful locksmith.

It is now easy to see that, both in the subjects chosen for instruction, and in the spirit with which

* See Barnard's American Journal of Education Vol. XI., p. 199, for Sir Wm. Petty's plan of an industrial school, containing nearly all valuable ideas of modern advocates of manual training. This plan dates from 1647.

they are presented, Locke is a pronounced utilitarian. Even Latin, now urged most largely for disciplinary ends, was in his day still indispensable to a gentleman as a means of gaining much useful knowledge, and in this view he urges it. Both this, and the methods he recommends rank him with the most thorough-going reformers. Thus he rejects all instruction that appeals merely to memory. He insists abundantly on reaching the understanding and reason of the child, and on assuring the knowledge of things before words. He advises to begin always with what is first and easiest, with what is most obvious to the senses, and to advance by easy and natural steps towards what we would ultimately unfold, making all that is taught familiar and habitual by practice, and aiming always to develop the abilities which the boy has at his stage of progress.

All this clearly implies that Locke presupposes on the part of the teacher a definite and far-reaching *aim*, and that he believes teaching is something far higher than the presentation of a mere memorized jumble of interesting facts. A few brief quotations will give his more important ideas in his own words. § 180, "In this as in all other parts of instruction, great care must be taken with children to begin with that which is plain and simple, and to teach them as little as can be at once, and settle that well in their heads before you proceed to the next or anything new in that science. Give them first one simple idea, and see they take it right, and perfectly comprehend it,

before you go any further ; and then add some other simple idea which lies next in your way to what you aim at ; and so, proceeding by gentle and insensible steps, children will have their understandings opened, and their thoughts extended farther than could have been expected.” § 195, “In history the order of time should govern, in philosophic inquiries that of *nature*, which in all progression is to go from the place one is then in to that which joins and lies next to it ; and so it is in the mind, from the knowledge it stands possessed of already to that which lies next and is coherent to it, and so on to what it aims at by the simplest and most uncompounded parts it can divide the matter into.” The principles of naturalness in order, and clearness and progression in instruction could not well be stated more succinctly than in these passages from Locke.

No one has recognized more sharply than he the necessity for success in instruction, of holding the mind free from the agitation of any passion and especially of fear. “It is as impossible,” he says, “to draw fair and regular characters on a trembling mind as on a shaking paper.” Like most of the Reformers, he cherishes the idea of teaching all things in a kind of play, an idea which it is easy to recognize as a revolt against the dull and joyless routine that had long passed for instruction, and which conceives as play the pleasurable activity of youth whose powers are enlisted in some study that they are brought to love.

This review of Locke cannot be closed more appro-

priately than by a quotation from himself, which happily sums up his aim. "The great work of a governor is to fashion the carriage and form the mind ; to settle in his pupil good habits, and the principles of virtue and wisdom ; to give him by little and little a view of mankind, and work him into a love and imitation of what is excellent and praiseworthy ; and, in the prosecution of it, to give him vigor and industry. The studies which he sets him upon, are but as it were, the exercises of his faculties and employment of his time, to keep him from sauntering and idleness, to teach him application, and accustom him to take pains, and to give him some little taste of what his own industry must perfect." The last sentence certainly lacks little of being a purely disciplinary view of the office of studies.

It may on the whole be doubted, whether, with all our modern advances in education, we have yet reached the full application of the valuable pedagogic principles set forth by Locke.

CHAPTER VIII.

FEMALE EDUCATION AND FENELON.

During the entire middle ages, the education of women had been confined to those of the higher or wealthier classes, and had followed closely the course indicated by the advice given by St. Jerome to Laeta in the 4th century,—advice which since his day has ever been influential with Catholic parents in matters of female education.* St. Jerome had advised his friend to care for her daughter's early education herself, making it mostly religious, and then to send her in her girlhood to a convent. "Let her," he says, "be brought up in the convent in the company of virgins. Let her learn never to swear, to think falsehood a sacrilege, be ignorant of the world, live the life of an angel, be in the flesh but not of it, and believe every human being to be of the like nature with herself." In accordance with this counsel of St. Jerome, the education of mediæval maidens was wholly monastic, and predominantly religious. They were taught prayers and portions of the Scriptures, to be reverent to God, obedient to parents, and submissive to their husbands, if so be that they should marry. Certain feminine graces and accomplishments befitting their station in life had careful attention. They were also

* See Barnard's Amer. Jour. of Edn., Vol. V., p. 594 for St. Jerome's advice.

taught feminine handiwork like fine sewing and embroidery, and, more frequently than men of the same rank, they were able to read and write.

During the 17th century, female education in general retained the same monastic character, but the ability to read and write had become general among the girls trained in convents. Their reading was, however, almost entirely confined to books of devotion; and, they were as far as possible kept in ignorance of the real world until they were ushered into it by marriage. The too frequently disappointing results of this conventional training were apparent. The noise of the great world of living, striving, sinning men and women penetrated even the walls of convents, and the vivid imaginations of the young recluses transformed its empty babblement into voices of pleasures, more alluring because unknown and forbidden, which summoned them to enjoyment. Into this world, painted in the delusive colors of fancy, they ventured on their release, ignorant of its wiles and delusions, eager rather for unwonted enjoyments than for a sober round of duties, and too often little restrained by religious scruples which hung but loosely upon them and which they were ready to discard with their conventional garments.

What wonder then that these inexperienced feet sometimes went sadly astray, that the expectations of parents and friends came to nought, and that young girls who were thought to be trained for pious wives and discreet heads of families, became, in too many

cases, the most frivolous and light-minded of triflers, without depth of principle to preserve them even from vice! What better could be expected from empty souls, ushered without experience into glittering scenes, and possessed within themselves of no intellectual resources,—than that they should feed on delusions and fill themselves with vanities and fancy these to be life! The need of a deeper culture for girls had, therefore, in this age become apparent to many,—a culture which should store an otherwise unoccupied mind with intellectual treasures, in contrast with which all that the world has to offer should appear in its true light and in its just proportions,—its vices stripped of their glitter, and its duties, its virtues, and its rightful enjoyments revealed as alone desirable.

Thus we have seen that Comenius would offer to girls up to the age of twelve the same education as to boys, and it is obvious how great an extension this would be for girls. Yet after the age of twelve, all his thought is fixed on the higher training of boys, leaving to girls no school encouragement for the higher development of their awakening powers. Indeed it has been left to the present century and to our own country to throw open all the avenues of the higher learning to women, and sometimes in the same institutions with young men, leaving it to experience to determine whether there really is that sex difference in intellectual gifts and aptitudes which has so usually been assumed. This is surely a bold advance

in the Americanization of learning, but one whose results have thus far justified its boldness.

With the Port Royalists who, as we have seen, made so great and beneficial changes in the education of boys, the training of girls was conceived wholly on a monastic ideal, strict and ascetic in character, directed rather to the moral and religious nature than to the intellectual, and adapted rather to fit its subjects for future blessedness than for present usefulness in the duties which life imposes. The great object with the sisters of Port Royal was to make sure that their pupils should be good from principle, and there was this excellent difference from most convents, that the girls were neither required nor encouraged to pray or to attend services save the mass, unless they sincerely desired to do so. Thus they discouraged and made needless a mere formal or hypocritical performance of religious duties; but for the needs of the intellect no larger provision was made than in other convents. To be able to read and write, to read good books of piety, to learn a little arithmetic on feast days, to gain skill in feminine handicrafts,—this was the sum of the provision for intellectual education at the Port Royal school for girls.

For a brief period towards the close of this century Mme. de Maintenon, so well known at the court of Louis XIV., in the conventional school for the daughters of impoverished nobles which she founded at St. Cyr, seems to have meditated a more generous culture for girls. She allowed them access to some of

the best stores of French literature. They even enacted plays like Racine's *Esther* with great spirit and éclat. But she seems to have shrunk in terror from the revelation which their acting gave her, of the spirit, the vivacity, the capabilities of intellect and affection which lay hidden in these young girls. The plays were given up. The studies were limited to reading, writing, a little arithmetic for accounts, and a slight knowledge of French history. The reading of the girls was confined to pious books, but even much reading was held in suspicion. Says Mme. de Maintenon "Reading does more harm than good to young girls.—Books make people witty, and arouse an insatiable curiosity."

Instead of books she would have girls learn domestic economy, the duties of household and family, and especially all kinds of household work. In all these the girls were practised, and in them their directress saw a moral safeguard. "Labor," she says, "calms the passions, occupies the mind, and does not leave it time to think of evil things." This is good in its way, but it is an effort to fill an intentional intellectual void with the labor of the hands, to send forth to the responsibilities of the family life for which they were trained, busy hands coupled with an empty mind. What then might happen when the hands need no longer be busy!

To us of the 19th century it appears that Mme. de Maintenon's original project of giving to girls occupations for heads as well as hands, was abandoned

merely because it promised to be successful, and that had these young maidens shown less talent the cause of female education might have been substantially promoted by their kind patroness. In justice to her, however, we should remember the prejudice against learned women which has been very slow in dying out, and which then had but recently given point to some of Molière's comedies. Her latent purpose was to prepare her girls for the marriage market of that day, and to make of them women with active brains and well-stored minds might have defeated her object.

Mme. de Sevigné is so widely known through her elegant letters, that it is needful only to allude to her as a woman of the 17th century, who, though she wrote nothing directly on education, was yet possessed of rare intellectual accomplishments without in the least incurring the odium of being a "precieuse," and whose letters show her to have been an ardent friend to a large culture for girls.

The most influential advocate in that age of a higher type of education for women, was doubtless Fenelon, Archbishop of Cambray: but as the larger part of his excellent treatise "*De l'Education des Filles*," is applicable equally to both sexes, and as its pedagogic ideas and methods are of great interest we will limit ourselves in this connection to what he proposes especially for girls, returning later to his general views on educational matters. Besides the treatise that has been alluded to, we have a letter to a friend

of his, a lady of rank, on the training of her only daughter, which is replete with good sense elegantly expressed. Leaving aside the consideration of studies, it deals with such matters as the inculcation of a taste for quiet elegance in dress, compassion for the poor and unfortunate, the unobtrusive possession of rich stores of solid knowledge, and most emphatically of all, deep religious principle nourished by quiet meditation.

In this letter, while approving of convents as the best places for the training of the majority of girls, because of the ignorant carelessness or the frivolity of mothers, or because of their preoccupation with many domestic cares, he does not hesitate to prefer home training where it can be made such as it should be, nor does he fail to point out the risks and disadvantages of conventional education. He says "The world never dazzles so much as when one sees it from afar, without ever having seen it near at hand, or having been fortified against its seductions. Hence I should fear a worldly convent still more than the world itself.—A girl who has been separated from the world only by being ignorant of it, and in whom virtue has not yet struck deep roots, is easily tempted to think that what is most wonderful has been hidden from her. She emerges from the convent like one who has been brought up in the gloom of a deep cavern, and who is suddenly exposed to the full light of day. Nothing is more dazzling than this unprepared-for passage, this glamour to which one has never been

accustomed. It is much better that a girl be gradually accustomed to the world by the side of a pious and discreet mother." From these guarded expressions of the pious archbishop, it is easy to infer that his opinion of a conventional education for girls is less favorable than that of St. Jerome, and that he considers it only as an alternative against pressing dangers at home.

Of the special education of women, he says in his treatise, "The education of women like that of men should tend to prepare them for their duties." The highest and most imperative of these duties, he believes is to educate their children aright, and he indicates clearly the wisdom, the prudence, the piety, the gentle firmness, and the knowledge of human nature that are essential for this high office. Next to this, the girl should be trained in those things which will fit her to rule successfully her small kingdom, the household, in which he emphasizes these points: A wise economy, as remote on the one hand from avarice and sordidness as from extravagance and ostentation on the other, and in order that they may attain this, girls should be given the care of something, should learn the values of commodities, and should be taught to keep accounts with accuracy: Girls should be trained to neatness and order, which however Fenelon would have carefully guarded against degenerating into a narrow fastidiousness or a petty and annoying fussiness: They should learn how to care for and manage servants, and in regard to

this his advice is full of a kind of wisdom such as we should hardly look for in a man and an ecclesiastic : Finally he recommends that girls should be reared with a careful regard to their probable future station in life, and with ideas suited to this as respects dress, duties, and pleasures.

The intellectual culture which Fenelon proposes for girls is very far in advance of his age, and presents an ideal for general female education which would do no discredit to any period. He would have girls taught to read and write *well*; and, while calling attention to the badness of much that passes for reading, he explains that what he means by good reading is the ability to read fluently and intelligently, naturally and so as to give pleasure to hearers. They should have a practical knowledge of the grammar of their own language, and should be so well versed in the simple rules of arithmetic as to be able to use them accurately in accounts and in the ordinary business of life. To this he would add a knowledge of the ordinary business forms and of those elementary ideas of law and justice which women are likely to need as well as men in many of the exigencies of life.

He recommends moreover the reading of carefully chosen profane authors, works of poetry and eloquence, and the history of France and Greece and Rome. For sacred history, he advises that there should early be given orally a series of brief and vivid narrations chronologically arranged, and presenting

the noblest and most inspiring incidents and characters of the Bible story. These he would have presented at intervals, not as tasks to be memorized, but rather as rewards for good conduct. The topics for such a series of narrations are given in the sixth chapter of his treatise, and they are especially worthy of note because they are probably the first suggestion of a method of teaching history from *vitalized centers* which is now attracting a good deal of attention. If girls are to learn any language save their own, he prefers that it should be Latin, "the language of the church," rather than Italian or Spanish.

Furthermore he recommends that girls be taught music and painting, but with careful avoidance in music of everything that would unduly excite the passions, and "make innocent pleasures seem too tame." Finally they should be taught to use their hands deftly in all the usual kinds of tasteful feminine work.

Obviously we have here a very generous scheme of general female culture, one which not merely busies the hands, but which is capable of filling both mind and heart so full of worthy and noble objects that there would be small leisure for vague fancies and vicious desires.

Mme. de Lambert, the foremost disciple of Fenelon, courageously claims for her sex the *right* to a suitable education, in which she would add to the scheme of Fenelon a little of philosophy, especially the Cartesian, to give precision to the girl's thoughts and to

enable her to talk sensibly. She enters a vigorous protest against including learning in the same ridicule with pedantry, by which doubtless some women were frightened away from the pursuit of learning ; and she declares that because women have been excluded from things of the spirit and from the literary culture of letters, they have been forced to fall back on mere pleasures.

Such then are the ideas which some of the best minds of the 17th century have advanced in behalf of a better education for women. They show clearly that the principles of the Renaissance are extending themselves to that which is but too apt to be overlooked by men,—the need of a progressive intellectual elevation of the female sex. The credit of initiating this movement belongs almost solely to France ; for Germany took no other part in it than the proposal of the exiled Moravian bishop Comenius.

Fenelon.

It has already been remarked that besides what Fenelon did to promote the better education of women, his merits both as a highly original and ingenious teacher and as the author of pedagogic works prepared to further his views as to how instruction should be given, are important facts in the educational history of the 17th century.

He was born of a distinguished family in 1651. He completed his college studies at the age of twenty, and then at his own earnest desire he was educated

for the priesthood of which his entire life made him in all respects a brilliant ornament. His gentle piety and his success in his parochial duties caused him to be made, at an early age, director of an institution for reclaiming Protestant women to Catholicism, and it was during the ten years that he held this place that he wrote his treatise "De l'Education des Filles," a work which deserves all the influence it has exerted by the soundness of its views, and by the pedagogic ingenuity of its suggestions.

In 1689, in the flower of his manhood, he was appointed tutor to the young Duke of Burgundy, grandson and presumptive heir of Louis XIV. The duke was an intelligent but headstrong child, of a violent, fierce, and ungovernable temper, and with an overweening sense of his own importance; but yet possessed withal of latent possibilities which were of the greatest promise. In taming this young human tiger and reducing him to order, in developing his dormant powers, and in inculcating in him those principles which should fit him for the high destiny which seemingly awaited him, Fenelon displayed all that prudence, tact, and delicacy of touch which he sets forth so admirably in his treatise. He especially exemplified his favorite idea of *indirect instruction*, which he sets forth in the 5th chapter of the treatise, in the admirable series of Fables and Dialogues, soon to be described, which he composed for the moral instruction of his charge. His extraordinary success with his seemingly intractable pupil caused him to

be named Archbishop of Cambray, in which diocese for nearly a score of years he displayed the virtues of the primitive apostles, in the simplicity of his life and in his services to the poor and wretched who were exposed to the horrors of war. He ended his noble and pious life in 1715 at the age of sixty-four.

On account of the nearly absolute character of the French monarchy, and the consequent enormous influence which their princes exerted both on the destinies of the state and on the entire tone and fabric of society, the utmost importance was attributed during the 17th century to the training of the future kings and princes of France. Hence some of the greatest and most learned men of the age, not only eagerly accepted the office of tutors to them, but also wrote text-books for their instruction, and sometimes treatises on the methods that they employed. Hence in France, the pedagogy of the 17th century has a prevailing character of something intended for princes, though the views that are expressed are usually equally applicable to all children.

Thus the famous Bossuet and other men hardly less distinguished were tutors of the Dauphin, the stupid and obstinate son of Louis XIV; and to penetrate his dull brain, Bossuet caused to be prepared the long-esteemed Delphine edition of the classics, besides writing himself a treatise of logic, a "Discourse on Universal History," and some other books. Thus Fenelon prepared for the Duke of Burgundy all his pedagogic works save his treatise on the education of

girls and the advice to a lady which has previously been referred to. That they contributed to his success with a pupil seemingly so unpromising, gives them an additional claim on our attention as the means used in an interesting pedagogical experiment. These works are the Fables, the Dialogues of the Dead, and the Adventures of Telemachus, which last was once largely used in the schools of this country as a French reading book.

Of the Fables there are thirty-six, many of which are of considerable length. They are all very lively and interesting in tone, and all embody moral lessons skilfully adapted to a child of such character and such future destinies as the young prince for whom they were composed. A good example of this is the pretty story of Rosimond and Braminte and the magic ring which a fairy presented to them in turn,—showing the good and the bad uses to which unlimited power may be turned, and its fatal results, when employed for selfish or malevolent ends.

Several of them were evidently intended to suggest to the quick-witted young prince the correction of the glaring faults to which he was prone, in that indirect or suggestive mode of instruction which Fenelon so greatly favored. Such, for example, are the fable of the Bee and the Fly, conveying a lesson on unreasonable anger ; and that of the youthful Bacchus and the Faun, in which the Faun is represented as laughing at the blunders of Bacchus in practising the language of the gods, to whom the young god “said with a

haughty and impatient tone, ‘How darest thou laugh at the son of Jove?’ ‘Ah,’ replied the Faun without emotion, ‘How dare the son of Jupiter make any mistake!’” To one who bears in mind the violent and haughty temper of the spoiled child with whom Fenelon had to deal, the application of fables like these is obvious.

The Dialogues of the Dead form a series of seventy-nine conversations imagined to be carried on in the realm of shades by various historic or mythic personages, ranging from Hercules and the Trojan heroes to kings and statesmen not long dead. They evidently had a double purpose, viz., to give to his royal pupil a keener interest in historic study by familiarizing him with famous men who did much to shape the destinies of their times, whilst at the same time inculcating wholesome ideas of many things which should fit the future king of France to reign justly and wisely.

The first purpose was analogous to the plan proposed by Fenelon for teaching sacred history by a series of interesting Bible stories chronologically arranged. Dr. Thomas Arnold, in an essay on classical teaching, in 1834 suggested a similar scheme for teaching history by a series of striking pictures and biographic narrations, arranged chronologically to serve as nuclei for future accretions; and twenty years later Drs. Spiess and Verlet embodied the idea in three concentric courses of historic and biographic narrations for German secondary schools, each course

reviewing and widening the course of the preceding one. These works have already passed through many editions. Thus this idea of Fenelon has begun to bear fruit in the last half of the 19th century.

It is to be regretted from an educational point of view, that the death of the Duke of Burgundy before that of his grandfather, has taken from us any proof of the success or failure of Fenelon in his second purpose, that of training a wise, just, and virtuous king for France; but the character which the young man is said to have exhibited during his brief career, so far as the roseate accounts of princes can be trusted, was such as to rouse the highest expectations among those who knew him.

Besides the Fables and Dialogues, Fenelon composed for his pupil a number of short pieces, partly in French and partly in Latin; and when he had grown to manhood, his old tutor gave him a final proof of the affectionate interest in which he was held by writing for his guidance the "Adventures of Telemachus," in which the son of Ulysses is represented as traversing various regions in a search for his father, and learning in his journeyings the art of governing justly under the tutorship of the goddess Minerva who has concealed herself under the guise of the wise old man Mentor. This work, which was published without the knowledge of its author, attracted to him the lively hostility of Louis XIV., who considered it a criticism upon his policy of government, and who prohibited all intercourse of his grandson with his former tutor.

In all this Fenelon has shown us vividly how serious is the task of him who undertakes the duty of preparing the young for their future career, and how great is the foresight and how indefatigable the pains that should be exercised in acquitting one's self of this task. The means that he used for the accomplishment of his purpose will repay a careful study by all educators.

Let us now return to the treatise on the Education of Girls, for a brief survey of Fenelon's ideas on general education. What chiefly impresses one in this treatise is the fineness and delicacy of touch which he thinks should be displayed in the management of youth, and the great emphasis which he lays upon careful moral training, the thorough development of estimable character.

The refinement of his method which appears in all his suggestions, and which Professor Compayré seems inclined to stigmatize as cajolery, is shown perhaps most obviously in his favorite mode of conveying instruction *indirectly* or by suggestion, which he uses, not only to captivate attention by a striking example aptly introduced, but for the higher purpose of eliciting independent mental activity on the part of the pupil in the application of the truth that has been covertly presented. The Fables and Dialogues are good illustrations of this suggestive method, which it need hardly be said is eminently objective in its character.

His delicate discrimination is farther exemplified in

the care that he recommends in studying the innate differences of temperament and inclination in children. In this he strikingly contrasts the difference of treatment required by those gifted with lively sensibilities or weighted by dull ones, and unwittingly lays down the lines on which a few years later he so happily trained a prince of quick understanding, but violent, headstrong, and haughty in no ordinary degree.

In moral education, like most educators, he lays great stress on early impressions as deeply influencing the entire future of children. It is strange that though this is so well known there is so little practical realization of it by parents and teachers. Fenelon would especially have the children of more favored parents guarded from an inordinate idea of their own importance, by guarding them from the servility of inferiors, by letting them see that the care that is bestowed on them is due less to their merit than to their feebleness, and by showing them that they are not perfect since they improve from year to year.

Like Locke, Fenelon calls earnest attention to the need of eradicating tendencies to craft and cunning, which when deeply rooted, he thinks constitute the most hopeless type of character; and he adds to this what he thinks of nearly equal moment, false-shame, which leads to secretiveness and dissimulation: children should be early taught to be prudent and discreet without being deceitful. "The highest prudence," he says, "consists in saying little, in distrust-

ing ourselves much more than others, but not in dissembling speeches. Uprightness of conduct, and the general reputation of probity bring to us more confidence and esteem, and consequently more advantages even of a worldly kind, than deceitful ways."

Moral lessons like others should be inculcated by examples and suitable narrations rather than by bald precepts. Thus he would choose for this instruction such events from the Bible "as, by affording pleasing and magnificent images, would render religion and morality beautiful and sublime." He deprecates the too common practice of making dress or delicacies for the palate, rewards for well-doing, because of the moral effects of such rewards in giving the child a *false standard of value*, leading him to esteem low things more than high ones. He would rather bestow judicious praise, or give as rewards such simple and innocent recreations as appeal rather to the æsthetic and intellectual sentiments than to vanity and sensuality. In this connection he weightily says, "Of all the faculties of the child, *reason* is the only one on which we can depend. If carefully trained it always grows with his growth." In this, as in other parts of moral education, he is in full accord with his cotemporary Locke whose "Thoughts on Education" appeared at nearly the same time.

The most salient ideas of Fenelon on intellectual education may be briefly summarized. 1. He strongly advises the direction of the child's instincts rather than their repression, especially the instinct of curios-

ity which should be guided into proper channels that it may become a source of knowledge instead of expending itself dangerously. Hence he is at one with the Innovators in care for observation. 2. He cautions against overcrowding children, while recognizing their characteristic lack of control over attention; nor would he have them contract a habit of accepting statements without due reason. 3. He counsels great judgment and discretion in the *selection* of matters to be taught to the young. "Into a reservoir so little and so precious only exquisite things should be poured," he beautifully says.

He not only everywhere advocates, but also shows how to practise, making learning pleasurable to youth and using ingenious expedients to secure on their part a delighted mental activity. Hence he strongly reprobates the evil practice of setting lessons as punishments, as tending directly to connect unpleasant associations with what he would always have presented as a delight. Finally, not only in these principles, but also in the care that he recommends for health, for letting children see and feel the use for the activities of life of all that they learn, for the exercise of authority mildly and without caprice, for cultivating judgment and reason by their use as fast as they develop, and for teaching all things, Latin included, through the vernacular and using thereto pretty and well-illustrated text-books,—Fenelon shows himself in harmony with educational reformers like Comenius.

CHAPTER IX.

ORATORY OF JESUS, AND BEGINNINGS OF AMERICAN EDUCATION.

It might be questioned whether the origin of the important teaching congregation, the Oratory of Jesus, is an educational fact of such prominence as to be made one of the characteristics of the 17th century ; but when we reflect upon the influence it has had in promoting and re-shaping secondary education in France, a most important member among civilized states, we are likely to find a sufficient reason for giving it this prominence.

This religious community was introduced in France about 1614 by Pierre de Bérulle who later became a cardinal. One of its leading functions was to teach. Intended at first for the education of candidates for the priesthood, its services soon extended far beyond these limits and included the secondary education of all classes. Although never by any means an aggressive body, it seems evidently to have been considered by the Jesuits a quiet protest against their organization, their methods, their spirit, and their tendencies. Hence they pursued it with unremitting hostility, in spite of which however it so prospered that in fifteen years after its foundation it had charge of more than fifty houses or colleges, and grew rapidly in influence thereafter.

It did in truth come into a silent antagonism with the Jesuits, in its form of organization, its principles, and its subjects of study, together with the spirit in which study was pursued.

Its organization was purely Gallican: its superior resided in France, and was responsible solely to the archbishops and to the general council of the order: its members were bound by no vows save the usual vows of the priesthood, and hence were free to quit the Oratory at pleasure: and the obedience of the brothers was a purely voluntary submission to superiors whom they themselves elected. Hence a degree of liberty and spontaneity was enjoyed by its members of which the Jesuits never dreamed.

Its principles were,—to render a cheerful obedience to officials and laws that they had themselves ordained: not to interfere with political matters, or, as one of them says, “our politics is to have no politics, and nothing is more foreign to our spirit than to establish and strengthen our order by human means:” to leave to individual members a large degree of personal liberty in intellectual matters: and, in instruction, to combine a taste for profane letters with a love for historic facts and scientific truths,—all of which was in strong contrast with the practice of the Jesuits.

In the nature and range of studies pursued, the Oratorians differed not less widely from the Jesuits than in organization and principles. The Jesuits made obligatory the use of Latin in communication: the

Oratorians promoted a thorough study of the mother tongue and taught all subjects in it up to the fourth year of school, after which Latin was required save in history which was always taught in French. The Jesuits made large use of Latin themes and verses : the fathers of the Oratory laid quite as much stress on explanation of texts, on oral work, and on imitation of what had been explained. The study of the Jesuits was almost exclusively literary on the *formal* side, other subjects being mere accessories to this : the Oratory combined instruction in the spirit of literature with a generous measure of mathematics, physics, philosophy, and history ; this last subject, indeed, was strongly emphasized and extended through all their classes, beginning with sacred history and ending with the history of France.

They united the study of geography with that of history, and enlivened it by the use of *mural charts*. A similar expedient to enliven the study of Latin grammar was also devised by one of the Oratorians, in the form of five charts of different colors, one for genders and declensions, a second for conjugations, a third for preterites and supines, and the other two for syntax and quantity. In Greek it was counted sufficient to be able to read it understandingly without writing it ; and that comparative study of languages, which at Port Royal gave birth to Arnauld's General Grammar, was not undertaken by the Oratory. Finally, it may be said that in philosophy they followed Plato and Descartes rather than Aristotle and the

schoolmen. In all this it may be seen that their tendency was not only away from the Jesuits, but towards the principles of the educational reformers.

Their discipline, while mild and winning like that of the Jesuits, yet avoided the spiritual subjugation, the espionage, and the spirit of equivocation which were so freely charged against their rivals.

The Oratorians produced also authors like Bernard Lamy, and Thomassin, in whose works we find embodied the principles and practice of the organization mingled with ideas peculiar to themselves. The former in his "Conversations on the Sciences," treats of studies in general, and of letters more than sciences. His idea of education is that it consists of three parts, acquisition of knowledge, justice of judgment, and rectitude of conduct; the first of which he conceives to be chiefly valuable for the second, and both these that they may lead to the third. The resemblance of this to Locke's idea is sufficiently striking.

Lamy like Fleury would have study begin with a good *Logic*, a curious perversion of the educational process, which would undertake to teach how to reason correctly before taking care to develop the power to reason at all, or providing materials for the exercise of reason. To the theory of logic he demands that practice in mathematics and especially in geometry be added. "There is," he says, "no study fitter to exercise the judgment than geometry and other parts of mathematics." In this combination of the doctrine of logic with its practice, Lamy follows in the track of Ramus.

In language he believes in beginning with versions, recommends a scheme having some similarity to that of Comenius, and suggests interlinear translations. He decries Latin versification, and proposes as the order in which Latin authors shall be studied, Terence, Cæsar, Sallust, Cicero, Virgil, and Horace. I am inclined to think we may find in a sentence of Lamy the hint of one of the fundamental ideas of Rousseau ; “we are the work of God,” says Lamy ; “we have therefore no reason to think we are bad.”

The key note to Thomassin is to be found in his idea that “there is hardly one of the classic authors of Greece and Rome who does not illustrate some obscurities in Holy Writ.” Hence much that he wrote is a plea for the study of classic authors from a Christian stand-point, not only on account of the pure morality of many of them, but because he believed that at bottom their fables are mere distortions of Christian doctrines, derived from natural religion or from traditions communicated by travellers. Moreover he fancied that Hebrew was the *original* language, and that Greek and Latin were mere off-shoots therefrom ; and from the combination of these ideas, he was led to emphasize the importance of the study of etymologies leading to comparative philology.

The materials from which this sketch of an influential teaching congregation has been condensed, have been mainly derived from Prof. Compayré’s “Critical History of the Doctrines of Education in France.”

What has been named as the last of the characteristic facts in the educational history of the 17th century is one which has a special interest for Americans : it is that with the beginnings of permanent colonization in this country, we have also the beginnings of efforts for education, efforts too which in at least one case look towards free, general, and even compulsory education. Of these beginnings we must here content ourselves with a mere brief sketch that it may take its proper chronological place in the series of important educational facts.

The early colonists of North America seem in all cases to have realized the need of education for their children, and to have made creditable efforts to provide for it, the form which these efforts assumed differing in different colonies. In the colonies south of New York, provision for education was with few exceptions made by private schools or by parental teaching of the elements of learning. Not a few of the wealthier families sent their sons to England for their training. Yet early efforts were made in Virginia with the aid of friends in the mother country for the establishment of both schools and a college in that colony ; but the project failed by reason of Indian wars, and the money that had been raised was lost.

To Virginia however belongs the credit of founding the second college on this continent, the college of William and Mary. This institution was chartered in 1693, and received large endowments in money and lands, besides the proceeds of a tax on tobacco, and

the fees for the survey of the public lands which was placed under its charge. Many of the leading patriots of Virginia received their education within its walls; but it has in recent years fallen into a neglect and decay that is greatly to be deplored in the case of an institution so venerable.

The documents of the Colonial History of New York contain numerous evidences of the care of the early Dutch settlers for the maintenance of clergy and schoolmasters. The duty of patroons and citizens in this regard is emphasized; taxes are decreed; complaints are made of the misdirection of funds intended for schools; the salaries and fees of schoolmasters are defined; the secretary of the Dutch West India Company stirs to emulation by pointing to the efforts of the New England colonies; and the names of several of the early Dutch teachers, beginning in 1633 with Adam Roelenstan, are preserved in these documents or in those so industriously collected by Dr. Pratt, late Assistant Secretary of the New York board of Regents of the University.

After New York fell into the hands of the English, the chief care that seems to have been given to schools during the 17th century was to assure that whatever instruction was given should be in the English tongue. All teachers were required to be licensed by the Archbishop of Canterbury—later by the Bishop of London—or by the royal governor; and some futile efforts were made to suppress the Dutch schools, which seem to have sprung up in nearly every Dutch hamlet.

Much the most significant of the early educational efforts, however, were those made in New England, first in Massachusetts, but followed very soon by Connecticut. The Boston Latin school was founded in 1635, the next year after the settlement of the town was begun, and claims to be the oldest existing school in the United States,—a claim however which is disputed in favor of the school of the Reformed Dutch Church in New York which was opened in 1633. In 1636, what has now become famous as Harvard University was founded, receiving its name from John Harvard, its chief early benefactor, and having for its foremost object the training of a learned clergy.

The early years of this now wealthy institution, like those of most American colleges, were years of a struggle with poverty. Its studies were marked by some of the same characters which we have seen in European schools,—a mastery of the Latin being required for entrance, then Greek, Hebrew and two other Oriental tongues, logic and ethics including politics, arithmetic and geometry, the Bible and divinity, a little history and less science,—such was early Harvard.

But even more interesting than this early provision for the higher learning, was the wise interest that was shown to provide instruction for all the children in the elements of learning. Thus in 1642 we find the General Court of Massachusetts “taking into serious consideration the great neglect of many parents and masters in training up their children in learning and

labor," ordering that this evil shall be remedied by the officers of the towns, and empowering them to punish neglect by fines or even "to put forth as apprentices the children of such as they shall find not able and fit to employ and bring them up."

Five years later, the General Court passed the law which is usually counted as the beginning of the American common school system. "It being one chiefe project of yt ould deluder Sathan, to keep men from the knowledge of ye Scripture, as in former times by keeping yem in an unknown tongue, so in this latter times by persuading from ye use of tongues, yt so at least ye true sence and meaning of ye original might be clouded by false glosses of saint-seeming deceivers,—yt learning may not be buried in ye grave of or^e fathrs in ye church and commonwealth, the Lord assisting or^e endeavors. It is therefore ordered" 1st, that when any town has increased to fifty families it shall establish a school to teach all youth to read and write, the teacher to be paid either by parents and masters or by tax as the majority of the town officers may decide; 2d, that towns of a hundred families shall establish a grammar school in which boys may be prepared for the university; and 3d, that a fine of 5£ be imposed on towns that shall fail for more than a year to obey this order.

As the towns grew richer during the century, this fine for neglect was doubled and then quadrupled. Thus we have in these old laws the outlines of a system of schools, and stringent provisions for enforcing

obedience to them by communities as well as individuals. Laws of kindred tenor and with sanctions akin to those contained in these two acts, were in less than ten years passed also by both the colonies that now form the state of Connecticut. In many New England towns also portions of the public lands were set apart for school purposes, and Massachusetts early set the example of appropriating one sixty-third of her public lands to create a fund for the support of schools.

Such were the remarkable efforts for education made by the American colonies, during the poverty, the weakness, and the struggles with an untamed nature and wild men, of the first century of their existence. These efforts appear even more remarkable when we consider the condition of general education in the mother country of most of the colonists, and generally in Europe.

In England there is yet no thought of caring for the education of the poor, nor is there likely to be for a century to come. The instruction of the high-born and wealthy is carried on either by tutors, and private schools kept chiefly by clergymen, or in those great secondary schools called public schools of which we have seen that so many were added during the 16th century to those already existing. The studies in these schools follow closely that literary direction marked out in the preceding century by the state of culture, and systematized by Sturm, with Latin and Greek, themes and versification, as their chief subject-matter.

We have seen in France and Germany vigorous and to some degree successful efforts to secure attention to the vernacular in schools. Like efforts were made in England by Richard Mulcaster in 1582, and again by John Brinsley, in 1612, but neither effort met with any favor. Brinsley's book on the grammar school gives us however a view of the school hours which is worth noting. They extended from 6 A. M. to 5:30 P. M. with a recess of two hours at noon and two intermissions of fifteen minutes each. Thus there were nine hours of school work; and honest Brinsley seems to fancy that a word of defence is needed for the two intermissions lest some may think they do nought but play.

In France, during this century, there was very little effort to educate the common people. Near its close in 1685 La Salle and the order of Brothers of the Christian Schools, which he founded, began their efforts for the gratuitous instruction of poor children, and they even established a *training school* for the supply of teachers suitable for their purpose, thus in some slight degree mitigating the general ignorance. The education of the more opulent classes was largely in the hands of the Jesuits who were, says Compayré, the real masters of education in France; to whose schools must be added the rapidly growing numbers of those controlled by the Congregation of the Oratory recently described.

In Germany all classes of schools greatly suffered, when they were not entirely broken up, by the hor-

rors of the terrible Thirty Years' War. After its close in 1648, the universities and secondary schools revived under the fostering care of cities and princes, and the methods prevailing in them were somewhat bettered, with the growing regard for the vernacular and the increasing use of text-books in German; whilst the study of Greek classics declined, a fact which Paulsen illustrates by the very small number of editions of Greek authors that appeared between the beginning of the 17th century and 1770.* With this decline in many schools, seems to have been correlated the rise of a kind of Lutheran Scholasticism, marked by the study of logic and metaphysics and the revival of disputationes.

Popular schools, where they were established, were mostly very bad, both from the poverty of the peasantry who had relapsed into a condition of semi-barbarism, and from the lack of well-instructed teachers. The teachers are described by Dr. Dittes as wofully ignorant of even the most elementary school subjects. Moreover various services besides teaching were exacted from the schoolmaster. He was church singer, organist, and clerk, secretary and servant of the borough, and attendant at weddings and baptisms: he brushed shoes and clothes, split the pastor's wood, threshed his corn, and collected his perquisites: some even worked at trades to eke out a wretched subsistence. Such multiplied and servile tasks might well be expected to make of the teacher a mean-spirited

* *Geschichte des Gelehrten Unterrichts*, p. 320.

creature, and a 17th century writer who is quoted by Dittes says of him, "Seven evil spirits possess the clerk or so-called village schoolmaster, viz., the proud, the lazy, the coarse, the lying, the wicked, the drunken, and the stupid devil," to which he adds what would naturally accompany such qualities, the poor devil.*

Of all the countries of Europe during the 17th century, Scotland made the best and most successful provision for general education. An effort was made in 1615, and a more effective one in 1633 for the diffusion of learning among all classes. Finally in 1696 a thorough-going law was enacted which required landlords to provide schools and school-houses in every parish, to nominate masters, to pay them a salary ranging from 5£ to 11£, and to fix the fees for attendance on the schools. The supervision of these schools was vested in the presbyteries, which could suspend or dismiss the master. The masters were usually able to teach Latin and the elements of Greek besides the usual elementary studies. As a result of this wise policy, the general intelligence and consequent influence of the Scots was long notable in Europe, and a very great diminution is said to have been perceptible in the amount of crime, beggary, and pauperism among the Scottish people.

* *Gesch. der Erziehung und des Unterrichts*, pp. 176 and 7.

CHAPTER X.

CHARACTERISTICS OF EDUCATION IN THE EIGHTEENTH CENTURY.

At the beginning of the 18th century education has already made great advances beyond the middle ages. Much has been done in Scotland for general education, and a very promising beginning has been made in New England; something is feebly attempted in the same direction in Germany; and in France the efforts of La Salle present some promise for the future. Secondary schools have multiplied and improved through the adoption of better studies and the systematization of their work by Sturm. The universities have mostly abandoned their scholastic subjects and methods, and have added to their studies some elements of mathematics, while pursuing their literary and professional work in a wiser spirit. The Baconian and Cartesian philosophy has already made itself felt, and the 17th century has closed with a brilliant era of discovery in which the name of Sir Isaac Newton is associated with those of not a few worthy compeers. The Latin tongue has lost something of its exclusive prominence, and the European vernaculars have won a considerable acceptance in instruction, paving thus the way for a more general education of the masses. Finally the ideas of the educational Innovators have already met with a con-

siderable acceptance in their most important points by men of great influence in Germany, France, and England.

The 18th century, beginning as it does under such auspices, is marked by a very considerable progress in promising directions, and by educational movements of a high degree of interest, but not by so great an advance as we might be led to expect. It was a century of political and social unrest which culminated near its close in revolutions. This unrest, these eager expectations looking forward to something better for humanity in the future, are mirrored in the educational not less than in the political history of the century. Educationally it was a period of fermentation, of discontent with the present, its ideals, and achievements, of experiments and beginnings which should bear their fruits in the coming age.

What seem to me to be the most significant and characteristic phases of the educational efforts of the 18th century, all bearing the stamp of the discontent and expectancy of the age, let us consider in the following order: 1, The Pietistic movement of Francke which aimed to give to education a more deeply spiritual character; 2, the Real-School movement, which starting from an impulse given by Francke and his followers, strove to give to the education of students not looking to professional careers a more utilitarian direction, one more obviously fitting boys for success in the practical affairs of life; 3, the movement for the professional training of teachers for their voca-

tion, which initiated earlier by the Jesuits and by La Salle, during this century took definite form in Germany and Austria under an impulse proceeding from the example and spirit of Francke; 4, the birth at Halle of the modern university spirit of freedom in investigation and philosophizing, and the rise of a new idea of humanistic studies of which Gesner was the leader and Göttingen the center; 5, the intellectual interest in pedagogic questions which took form in the remarkable theoretic works of Rollin, Rousseau, and Kant; 6, the Philanthropinic experiment of Basedow based on the ideas of Comenius and inspired by Rousseau, which even in its failure exerted a very considerable influence in Germany and even beyond its borders; 7, the beginning of the work of Pestalozzi; and 8, the strengthening in Germany of the movement for popular education, not only through the efforts of several governments, but even more effectually by the benevolent exertions of Von Rochow, with which movement was also correlated the triumph of the vernacular in its use for school and university instruction.

I. Although the Pietistic movement centers in Francke, it received its original inspiration from Philip J. Spener, a pious Lutheran clergyman who died in Berlin in 1705 at the age of seventy, after having held high ecclesiastical offices which were gained even more by his sterling spirituality of life and teaching than by his remarkable eloquence. Spener, while adopting in the religious instruction of his

flock sensible methods adapted to the experience of children and unlettered people, strove with great zeal to make religion a matter of the heart not less than of the intellect as it had then too exclusively become, by treating it pedagogically after the pattern of our Saviour.

His spiritual successor, Augustus Hermann Francke, was born at Lubeck in 1663 of respectable parentage. He was early left an orphan ; received his gymnasial education in Gotha where the notable school reform then in progress may possibly have made some impression upon him ; at the age of fourteen was declared *ripe* for the university ; and in his nineteenth year went first to the University of Erfurt and later to that of Kiel where he spent three years studying such branches as physics and botany in connection with theology. Whilst in the university and afterward in Hamburg, he gained some experience in teaching which had a great influence on his future career.

He found himself disgusted with the cold scientific heartlessness of tone of the theology and the religious teaching which then prevailed, but after a period of deep religious doubt and conflict he attained inward peace in believing in a religion which embraced both head and heart ; and partly through the influence of Spener, he was imbued with that spirit of practical religious zeal which issued in Pietism.

The name Pietists given to the followers of Francke at first in derision, as the name Methodists was later

given in England to men full of religious zeal, presently ceased to have any satirical meaning, and became a mere descriptive term. After a few years disturbed by petty persecutions, Francke was called to Halle in 1692 by the influence of Spener, as professor of Greek and the Oriental languages in the new university which was about to be founded there, assuming also the charge of a suburban church ; and there he remained till his death in 1727.

The formation of that wonderful series of educational and benevolent institutions, which now constitutes his fit monument, as well as the chief ornament of Halle, was begun in the humblest way in 1695. Pity for the misery and semi-barbarism of the poor, both of which were aggravated by their dense ignorance, inspired him, when he had found a considerable gift in the alms-box for the poor, to start with this a school for poor children in his own house, taught by an indigent student of the university. This school rapidly increased ; the children of well-to-do citizens were admitted to it for pay ; presently it was found needful to separate the poor children from the wealthier ones ; some sons of nobles applied for admission, and separate arrangements were made for them ; provision was added for a few orphan children ; and all these, under the creative benevolence of Francke, which by its wisdom and unselfishness attracted large gifts from many quarters, became the germs of great future institutions.

The poor school developed into what would now

be called a Bürger school; the school for a richer class, into a Latin school or Gymnasium; the school for nobles into what was called a Pädagogium; and the provision for a few orphans into Francke's Orphan House. To these were added, as means would permit, a free table for poor students of the university, an oriental college, and an asylum for widows; and, as sources of income, an apothecary shop, a bookstore, and a printing house from whose presses have issued millions of cheap copies of the Bible and other books.

All this, it should be remembered, was accomplished by the efforts of one man, himself poor, but whose faith attended by wise action proved a power to attract the aid of the rich; who at first relied wholly for the means to support his poor dependents, and to erect buildings for their accommodation, on the seemingly casual gifts of the benevolent which he accounted providential; and who, besides the oversight of these great enterprises, did duty as pastor of a church, and professor in the University of Halle.

When Francke died at the age of sixty-four, the pupils in his three schools numbered over 2,200, besides which the teachers, inspectors, servants and other employees made over 300 more. In the citizen school, besides the usual elementary branches, history, geography, and natural history were taught; in the Gymnasium, besides Latin, Greek, and Hebrew, instruction was given in mathematics, history, music, and geography; and the Pädagogium was provided with a botanical garden, a cabinet of natural history,

physical apparatus, a chemical and anatomical laboratory, and a workshop for turning and for glass-cutting. Especial attention is called to this list of subjects and appliances, in Francke's schools, because it shows the very considerable attention that was given to what the Germans term Real studies, and testifies to a noteworthy comprehension of what is the right way to present such studies. It was this feature of these schools through which they became the precursors of the Real school movement by which Germany continues to be so deeply stirred, and which has spread to other countries, our own among the number.

A second notable feature of Francke's organization, was the provision which he made for some preliminary training of a professional kind for those who were to teach in his schools. The teachers were taken from the students of the university, and as the numbers in the schools increased, the force of that truth which Ratich had proclaimed doubtless became manifest, that teaching is an *art* that must be learned beforehand to some extent, or else acquired at the expense of pupils, and too often with irremediable harm to them. Hence in 1707 Francke formed a kind of Teachers' Seminary for those who should afterwards teach in his schools, in which for two years they were trained and boarded free of cost on their pledge to teach afterwards in his institutions for at least three years.

In training these men, he laid great emphasis on combining with instruction also education, i. e., care-

ful moral and religious training, also on order and method, on care for the pupil's individuality, and on a conversational and developing procedure instead of the prevailing mode of formal exposition. Thus I apprehend that he did more than had ever before been done to establish a permanent teachers' vocation, and became the forerunner of the Teachers' Seminaries which during the century began to spring up in Germany. This is said remembering what the Jesuits had already done in this direction, but remembering also that with them teaching was merely a stage in the period of the novitiate, and mostly ended with the full admission of the novices into the order.

A third peculiarity of Francke's institutions was that which gave to him and his adherents the name Pietists. They were "especially characterized by their prevailing Christian or perhaps Pietistic element, which appears in their many devotional exercises, in the neglect of the Greek classics for the New Testament, and in the study of Hebrew for the understanding of the Old Testament." A less friendly account says "They heaped devotion on devotion. At every opportunity there was prayer, preaching, exhortation, and singing." It was alleged that by the emphasis laid on religious exercises the secular studies were somewhat neglected, or at least unduly belittled in comparison with the attention that was paid to the soul's welfare. Though it is possible that this is somewhat overstated for the schools during Francke's time, there is no reason to doubt that under his suc-

cessors, in whom religious zeal was not tempered by his strong practical sense, his religious ideas were pushed even to caricature.

It is also mentioned as another peculiarity of these schools that pupils occupied places in different classes or grades according to their progress in different studies, e. g., they might be in a fifth year class in Latin, and in a second or third year class in mathematics, or vice versa.

It may readily be imagined that the zealous young men trained in Francke's schools would be likely, wherever they went as teachers, to disseminate his ideas and make them widely influential in education. How real and how important was this influence, becomes apparent in the rise of the Real School idea, and the springing up of Teachers' Seminaries, in both which movements Francke's men were leaders.

II. We have seen the practical direction of studies in Francke's schools, which ran parallel with the emphasis laid on religious exercises, and which was manifested, not only in the introduction of studies properly called Real, and in the observational way in which they were to be taught, but also in the purely practical ends that were proposed in the study of Greek and Hebrew, that they might be used for the better understanding of the Scriptures. Francke's aim in education was "Godliness and Prudence"; and to the latter corresponded the practical direction of studies in which was enclosed the germ of the Real-school movement.

In the more practical direction of studies, Francke by no means stood alone. The university of Halle, as is shown by its list of studies outlined by Paulsen (p. 361), was a center of influence in this respect, where the free-thinking Thomasius was in *intellectual* sympathy with the Pietist Francke, and where Christian Wolf became famous, through whose compends "Philosophy learned to talk German and found access to general culture."

Associated with Francke in his work was Christopher Semler who early showed a marked preference for practical studies, and had in 1706 received a strong endorsement of his ideas from the Berlin Society of Sciences. The name Real school seems to have been first used by Semler in 1739 in a report on his "mathematical, mechanical, and economic Real school in Halle," in which he designates as the subjects of such a school, besides religion which as a Pietist he would naturally emphasize, "the useful and in daily life wholly indispensable sciences," like mathematics, drawing, geography, history, natural history, agriculture, etc., in which he lays stress on the observational treatment of the various subjects. It is obvious that the ideas of Comenius have struck root, and that his text-books, especially the *Orbis Pictus*, are beginning to bear fruit.

In more than one high educational quarter, at about this time, we find complaints of the lack of adaptation of studies to the destination of pupils. A single example must suffice. In 1742, Schöttgen,

rector of a school in Dresden, after complaining that schools are arranged with a view to learning Latin, and that children who are destined to business careers are forced to learn Latin which is useless to them, to the neglect of what would be useful to mechanics, artists, or merchants, advises that special classes be organized for such pupils. He ends by saying, "I know my proposal is already rejected before it has been brought to light; but if what there is in it is not yet ripe, we will wait until the time for it arrives." This is but a specimen of an educational feeling of mingled discontent and expectation that was constantly growing stronger, and of which the Real school movement was one expression.

The first Real school of any note was established in Berlin in 1747 by Johann Julius Hecker, an adherent of the ideas of Francke; and in the succeeding year there was added to it a seminary for teachers. Like most new enterprises, this school and those which followed it fell into errors and extravagances, the most serious of which was the great multiplicity of the studies that were attempted to be presented, insomuch that not less than *eleven* hours per day were required for school work; there was also an effort to educate for special callings. With time and experience, however, such schools have fitted themselves into a place in the school system of Germany, as schools of modern culture parallel to the schools of classical training, and what has recently occurred in Prussia would indicate that their modern side is to be spe-

cially emphasized. The influence of the idea that underlies them has become very apparent far beyond the boundaries of Germany.

III. The movement for the professional training of teachers for their work which was initiated in this century was unquestionably much the most significant educational fact in the century, and fraught with the most important consequences to the future of education. Hitherto in the world's history, men had served a long and tedious apprenticeship to various arts and trades, or had labored years with patience to master the learning, the theory, and the technique of the several professions ; but curiously enough, the science and the art which comprehends in itself the most effective mode of presenting and mastering sciences and arts, trades and professions, had been strangely ignored.

Sages and philosophers in all ages had dwelt impressively on the vigor and permanence of the impressions made on young minds, and on the decisive influence they exert in shaping the whole tenor of life and in determining the destiny of human beings, without appearing to have dreamed that the persons to whom was to be entrusted a task so difficult and so delicate had need of any special training for their important duties. Hence the vocation of teaching had been left wholly to chance, and as we have seen, had too often fallen into the hands of those who, with a certain modicum of literary acquirements, had been found unfit for other employments.

Even those persons who were less heedless, had adopted without due consideration one or the other of two vague and baseless theories, of which one made the ability to teach successfully wholly dependent on knowledge of the subject-matter to be taught, as if a knowledge of *materia medica*, for example, would suffice to give skill in prescribing for various human ailments,—whilst the other rested on a shadowy notion of something analogous to animal instinct, called inborn capacity to teach, which displays itself spontaneously, as a dog barks or a canary sings.

We have seen that it was the chief merit of Ratich that he clearly conceived the necessity of an art of teaching, and his misfortune that he illustrated the truth of his idea by the disasters of his career. We have seen the success of the Jesuits which was largely due to the care with which they trained and supervised the teachers in their schools. An attempt was made about the beginning of the 18th century by the Grand Duke of Gotha to establish seminaries for the training of teachers in his dominions, but it succeeded so ill that it was soon given up. Hence the significance of Francke's arrangement for training teachers, which by its success became the forerunner of the system of Teachers' Seminaries.

In 1748 Hecker established such a seminary in connection with his Real school, and in 1753, this was adopted by Frederick the Great as a state institution, thus becoming one of the first two or three *public*

institutions for the professional training of teachers.* From this time forward the number of such establishments rapidly increased, so that by the end of the century about thirty existed in the various German states.

Dittes says of them that in the beginning and for a long time afterwards they were merely accessories to other educational institutions, and that chief emphasis was laid in them on sectarian instruction, on agricultural branches, and on preparing teachers to be serviceable as organists and choristers. The teachers were to be prepared to eke out their subsistence, by adding to their meagre pay from the schools gains from other industries. Still it was a beginning of professional training despite its shortcomings.

The term Normal School by which teachers' seminaries are generally known in America has so far not been used for a reason that will now appear. The first noteworthy school to which that name was applied, was founded in Vienna in 1771 as a *model* school to which was attached a school for the training of teachers. Its first director says of it, "Its chief purpose is this, that it may serve as an *example* to all other schools in and around the city and in the country; that in all other schools as well the teachers as the pupils may through it be sustained in zeal and right procedure; that especially both spiritual and secular schoolmasters, who are hereafter to be em-

* Such a seminary seems to have arisen in 1751, in Hanover, Schmidt, Gesch. der Päd. Vol. III., p. 726; and ibid p. 513, he says that Fred'k William I. in 1735 founded at Stettin the first Prussian Lehrer-Seminar.

ployed in the instruction of youth, may in it be instructed and trained in the humanities; and that these may go out from here even as from a center into all the schools of the land, and, in accord with the new mode of teaching here acquired which is established and brought into use in conformity with nature and the spiritual powers of man, may be able to give uniform instruction to the youth who are intrusted to their care.” *

This school was obviously expected to exert its influence, quite as much by serving as a model on which other schools should be formed, and in accordance with whose practice they should shape their methods, as by furnishing a few trained teachers to the system. It was, says Dr. Dittes, at the same time elementary school, Real school, and Teachers' Seminary, and hence bore a stronger likeness to the form into which many of our American Normal schools have grown, than to the Teachers' Seminaries and Training colleges of Europe.

Besides these schools for the training of teachers chiefly for the elementary schools, provisions began to be made in this century for the professional preparation of teachers for the secondary schools, by the establishment in some of the German universities of “seminaries,” and lectures on the teaching of German and the classic languages, and on pedagogic matters in general. The account which Paulsen gives of Gesner's pedagogic Seminar, in the newly-founded

* Dittes, *Gesch. der Erziehung und des Unterrichts*, p. 217.

university of Göttingen, and of the motives which prompted it, is so interesting and so much to the point, that I give it with little abbreviation.

After stating that "the universally felt want was teachers better prepared for their calling," he quotes the opinion of Buddaeus that "the origin of the whole evil lies in the fact that men are placed in charge of the schools who are better fitted for anything else than for teaching, who are indeed in a condition neither to think, nor to live, nor even to speak correctly."—"The weightiest cause, however, is that the universities almost wholly neglect the preparation for the teachers' calling. What the theologue, or the jurist, or the university professor needs is taught in the university, but not what the schoolmaster needs. Men must therefore be taken for school offices who have been prepared for other callings."

Moved by these considerations, about 1738 Gesner established in Göttingen a pedagogic seminar, and conducted it himself nearly twenty-five years. "The introductory direction of the school ordinance designates as the end of the institution 'to furnish good, well-prepared teachers of which there is a lack in most places, and to that end to permit a certain number of such men who devote themselves to the teacher's vocation, to be guided in our university to their school studies, so that to those who have to occupy school offices, or on the other hand to seek out good teachers for their children, opportunity may be offered to meet with such.'—The business of the seminar was

the training not of learned theologians but of school-masters, as appears from its entire arrangement. The members, nine in number, were theologues; but besides their theological course, they were bound to pursue a philosophical course embracing all the branches of the philosophic faculty, mathematics, physics, history, and geography.

“The philosophic studies in the narrower sense, the director of the Seminar presented to them,....and caused them once a week to dispute thereupon in Latin. Farther, he presented to them, without excluding other things, in two hours daily a general instruction on the art of teaching (*Informationswerk*);Latin and Greek grammar with constant reference to school instruction; in the same way Latin and Greek authors to show their proper school treatment; and also the most needful things out of rhetoric, poetics, and antiquities. Finally, that the seminarists might have a chance to put their own hands to the *informationswerk*, they were on the one side admonished to seek everywhere intercourse with children, and in especial were to be admitted to give some instruction in the schools of Göttingen.”

The example of Gesner was followed by not a few of the universities, the lectures on pedagogy as an art, being sometimes if not always, given by the professor of Philosophy. Thus the pedagogic lectures of the celebrated Kant near the close of the century, were given as a natural adjunct to his philosophic work. These we shall have occasion to examine later.

Thus during the 18th century, we see the definite beginnings of professional training for teachers of both higher and lower schools, and its adoption as an affair of the state. It has not yet assumed very great proportions, has by no means become ideal in its character, and is almost entirely confined to Germany and Austria; but from this significant beginning, it has spread widely during the present century to all parts of Europe and America, and in the last two decades has caused the foundation of chairs of pedagogy in several Scottish and American universities.

IV. The change in the spirit of university work which began during the 18th century in the universities of Germany, and which has spread thence till it is now recognized as the genuine modern university spirit, together with the change which was wrought in the entire spirit and *idea* of humanistic instruction, deserves to be considered as a very noteworthy characteristic of the educational history of the century. In the one change Halle was the leader, in the other Göttingen.

Although universities had been centuries in existence, they had not yet, it might be said, attained their intellectual and spiritual *majority*. They had not hitherto, so far freed themselves from dependence on the ideas of the past as to assume a position of independent leadership in the various realms of investigation and of thought. In freeing themselves from the domination of scholasticism, they had passed under the wiser and more elevating domination of the

master minds of Greece and Rome ; and in exchanging scholasticism for humanism, they had rather changed masters, than rid themselves of the spirit of subordination. Aristotle and Cicero took with them the thrones vacated by Peter the Lombard, Duns Scotus, and Thomas Aquinas.

But in 1711, Gundling in Halle, in a public dissertation propounded the question, "What is the office of the university?" and boldly answered it in this wise ;—the true office of the university is "To guide to the capability of distinguishing truth from falsehood.... which is impossible if any limits whatever are set to free investigation." It was, says Paulsen, "an unheard of speech." It gave the first definite formulation of the modern university spirit, the spirit of independence in philosophizing, and of freedom in the investigation of all possible questions and in declaring the result of one's own free thought and research.

Before the close of the century, nearly all of the universities show a profound change from the olden lack of independence "in the direction of a free and independent scientific investigation ;" and a curious index of the change is the displacement of Melanchthon, the 16th century "preceptor Germaniæ," whose compends merely formulate the acquisitions of the past, by Christian Wolf, "professor Germaniæ," to whom "*Reason* is the sole and final judge of true and false, and who asks us not to believe, but to doubt, to test, and finally to gain conviction solely by the necessity of reason."

While this elevating change in the spirit of the universities was radiating from Halle, a change equally significant for the future of the secondary schools, in the entire spirit of humanistic instruction and in the ideas by which it was actuated, was beginning at Göttingen, of which J. M. Gesner was the leading spirit. During the preceding century humanistic studies had degenerated into mere language study, pursued for style, or as a means of access to the sources of theology and law. Authors were read, not to clarify taste, nor to widen knowledge, but to increase the stock of words and turns of expression.

Ernesti in 1738 aptly describes this reading and its results ;—“ *The stupor pedagogicus* comes necessarily from the reading of the ancients when it is directed exclusively to style. We see then in them, not at all what is said, how it is said, with what skill and elegance it is said, but merely formulæ of expression which are treasured up for future use. Thus it happens, as I have observed in many cases, that when pupils have read a work and can translate it into German, they are by no means able to state its import and the manner in which it is executed ; but if you question them on the phrases and formulæ that occur, they know these thoroughly. Hence the youth go from the school more stupid than they enter it.”

Paulsen, in describing the Halle pedagogy which was typical of the time says, “ the literature of the ancients appeared as a tolerably superfluous addition which served merely to an occasional learned man as

a quarry for polyhistoric industry in collecting." Hence it is not strange that men had lost faith in such studies; and that they were pursued in the schools lifelessly and joylessly from custom as a mere routine. It was obvious that unless a great change was made, humanistic study would die of inanition.

The change that was undertaken by Gesner at Göttingen, ably seconded by Ernesti, his successor in the Thomas schule in Leipsic, was in reality a revolution. The classic authors were restored to honor as masters of thought, instead of being used as illustrations of grammar rules, or as mines of words and forms of expression by working which diligently, boys might be enabled to speak Latin with tolerable correctness. They were to be used rather to instil into youth the qualities by which they are characterized, or, as Ernesti expressed it, "that from early youth we may absorb by intercourse with the wisest and most elegantly cultured men, the doctrines of philosophy and worldly wisdom, whilst at the same time learning at first to recognize and appreciate, and then gradually to appropriate to ourselves their clearness, dignity, and grace, their sagacity and force, their elegance of speech and propriety of statement." What was now to be aimed at was therefore the ability imaginatively to live and think with the ancient masters of thought, and to become thereby wiser and more finely cultured men.

To this end, all the aids by which the past might be restored to its integrity were diligently studied and

used by Gesner, by his eminent successor Heyne, and later at Halle by F. A. Wolf, the father of high philological research. This influential trio, by their own diligent efforts, and more effectively by the great number of thoroughly trained teachers whom they sent forth into the secondary schools, completely revolutionized humanistic instruction in Germany, and placed it on that firm footing which it has ever since retained.

It is not fitting to close this notice of the rise of the new Humanism, without due mention of one who formulated not a few of the arguments by which humanistic study is wont to be defended against attacks,—Friedrich Gedike, who died in 1803 before reaching his fiftieth year, director of a famous school in Berlin. “The ancient literature,” he declares, “is and remains, source of our science. Stop up the springs, and the streams will run dry. No study is so fitted to awaken and to stimulate all the slumbering powers of the spirit, to prepare the soul for all possible sciences, as this, if only it is pursued in a philosophic way, and conformably to the rules of a right method.” He urges that if one totally forgets his classics in after life, he cannot lose that culture and suppleness of spirit derived from them; that their remoteness in time and in ideas is a great advantage, “Since this strangeness, this transportation into remote lands and times has the greatest cultivating power for the spirit”; and that the difficulties which grow out of their remoteness is another advantage,

since "they give strenuous exercise to the powers and so strengthen them," whilst "our indigenous literature affords pleasure, but without labor."

Thus the new Humanism passes from the 18th century, perfected in all its appointments for affording an elegant and many-sided culture, and equipped with the arguments by which it may repel all future attacks of educational Philistines.

CHAPTER XI.

IMPORTANT EDUCATIONAL TREATISES OF THE EIGHTEENTH CENTURY.

Section 1st.—**Rollin.**

V. Of the educational works that appeared in this century, three have a special interest, viz., Rollin's Treatise of Studies, Rousseau's *Emile*, and the lectures of Kant on Pedagogy; the first of which is a systematic treatise on belles-lettres studies and moral and religious training; the second, an enthusiastic theory of education from the standpoint of its author's peculiar ideas, a theory, however, which has had a wide influence; and the third, the pedagogical views of one of the greatest philosophers, views which are always weighty and unusually suggestive. We will consider these works in the order in which they were published.

Charles Rollin was born in 1661, and was the son of a poor but respectable mechanic in Paris. His remarkable youthful promise caused him to be educated at the College du Plessis; he was appointed professor of rhetoric at the age of twenty-six; and was twice elected to the dignity of Rector of the university of Paris, in which office he distinguished himself by useful reforms in both studies and discipline, that left an enduring mark on the university.

In his later years, he published an Ancient History, once very famous and still somewhat read, which was written chiefly with a view to the instruction of youth and to vindicate to men the ways of God in history. He died in 1741.

His interest for us in a history of education centres in his "Traité des Etudes," which Villemain pronounced "a monument of good sense and taste," and Voltaire, "a book forever useful." It is certainly a most remarkable treatise, for the time when it appeared, 1726-28, and is still worth the consideration of educators, not only for the judiciousness of its views on moral and religious education, but because he accompanies his suggestions on methods with abundant specifications and illustrative examples. The doctrines of the treatise have had an enduring influence on the French colleges; and the interest that it attracted in England is attested by a translation into English that I have recently seen bearing a date prior to 1750. As the work originally appeared it consisted of seven Books and a Preliminary Dissertation, to which later was added a Book on primary education.

In the Dissertation and the 7th Book "On the Internal Government of Classes and Colleges," Rollin gives at large his views on moral and religious education, most of which have now become educational commonplaces. A few things will however bear repetition even now. "It is virtue only," he says, "which fits men to fill public positions rightly. It is the good qualities of the heart which give value to

other qualities, and which, while making the true merit of the man, render him also a fit instrument for promoting the well-being of society.” This truth certainly is as needful to be emphasized to-day as when Rollin uttered it.

Again, with regard to moral and religious impressions, he considers all stated lessons ineffectual, since they put the young on their guard and are apt to close their hearts; while the lessons of celebrated men in history which occur in their reading, seeming to be presented by chance, are unsuspected and may be made effective by judicious remark. “Not,” he sagaciously remarks, “that I believe it needful to *insist* much on moral reflections. The precepts which relate to morals should be short and sharp, and hurled like a dart. This is the surest means of causing them to gain a permanent lodgment in the soul.”

In the counsels which he gives for the training of youth and which he arranges under thirteen heads, he follows closely in the footsteps of Fenelon and Locke to both of whom he acknowledges his indebtedness; but he minglest in his treatment of their common opinions, happy remarks of his own, one of which is worth quoting as a specimen of many: “The sovereign skill in education consists in knowing how, by a happy temperament, to ally a strength which holds children without repelling them, with a gentleness which wins without softening them.”

In turning now to his discussion of studies, I desire to call especial attention —(1) to the stress that he

lays upon the study of the mother tongue, and the means which he proposes to acquire elegance in its use ; (2) to his ideas in regard to the teaching of Greek and Latin ; (3) to the emphasis with which he recommends the study of history and the method by which he would have it taught ; and (4) to his earnest recommendation of the training of observation by true object teaching.

(1) Rightly to estimate the merit of Rollin in what he proposes for the cultivation of the mother tongue, it should be borne in mind that the use of one's vernacular was little practised in schools or among the learned, that Rollin had himself written little save in Latin to the age of sixty, and that his sketch of a method of teaching the vernacular was probably the first that was ever published since the scheme of Quintilian in his *Institutes*.

This will be likely to increase our admiration for his pedagogic sagacity, since he recommends and shows definitely how to use every means now employed by the most enlightened educators in the teaching of their mother tongue, viz., early care for articulation and pronunciation, and for the correct use of words ; grammatical study ; literature ; translation from other languages ; and composition.

In grammar, he advises that the knowledge of principles should be made progressive, that these be carefully applied in the pupil's reading with exact reasons for the use of all words, that the rules should be carefully chosen with omission of all that are but

little used or are beyond the comprehension of pupils, and that but little be given each day in a pleasing manner under the guise of conversation or of consulting pupils about proper forms of expression.

As to literature, he proposes a list of good French authors of his day, especially historians, which he would have read and explained a half-hour daily; and he gives models of the mode of exposition, the etymological and grammatical remarks, the philological explanations, the observations on style, and the moral reflections which might appropriately be introduced. He also makes the novel but sensible suggestion that when the taste and judgment of youth are somewhat matured, it would be well to introduce brilliant but sophistical authors for analysis and criticism.

Of translation, its difficulties, and exigencies, and of the character of good translations, he treats fully, with many examples of translations by good authors compared with the originals, and their merits or defects pointed out. Composition he would have begin with brief stories or fables, advancing to letter-writing with care for its proprieties, and this followed by descriptions and narrations on familiar subjects, paraphrases of passages from classic authors, and finally free treatment of subjects suggested by the pupil's reading.

This is a full and generous course of study of the mother tongue, so skilfully carried out and so well illustrated by examples that the best practice of

modern schools can suggest little to improve it save in details. It would be interesting to know how far that skill in the use of their own tongue which marks well-educated Frenchmen, is due to the continuing influence of the course and methods suggested by Rollin.

(2) Rollin lays little emphasis on Greek, in which he thinks it sufficient that boys should be able to read authors understandingly; but, after the manner of his time, he deems it essential that Latin should be mastered for all the uses of a current language. Yet in this he would have the early instruction given in French, "because in every science and in all knowledge, it is natural to pass from a thing known and clear to one unknown and obscure." The necessary inflected forms, and the commonest principles of syntax, he would have early applied in the reading of easy passages from authors rather than in attempts to write Latin as was then common, additional rules being supplied only so fast as they are needed or as fair occasions can be made for their use. The writing of themes he would reserve for a much later stage of progress when boys shall have acquired a considerable stock of words and forms of expression, requiring them however to use what they possess in translating easy sentences into Latin.

No haste is to be made, since "they will learn fast enough if they learn well." He proposes an order for the exposition of authors in advanced study, which, in accordance with his unique but excellent

method, he illustrates by abundant examples in considerable passages from authors, which are expounded as models for students and young professors. In general, it may be said that the reforms in classic instruction which he proposes, are in the direction of that new and enlightened Humanism, which at a little later date began to make its appearance in Germany.

(3) The aim that Rollin proposes in the study of history is, "To form the mind and heart of youth, to inspire in them a taste for reading especially historic reading, and to make them understand the good they may derive from it"; and he declares his belief that when properly taught it becomes a school of morals for all men, and hence is "the first master that should be given to the young." What he considers right instruction in history will be guided by the following principles,—to bring into it clearness and order by due attention to geography, and by a proper framework of chronology, with few but important dates; to observe the customs, laws, and usages of nations; to search most of all for truth; to seek the causes of events with diligence; to make a careful study of the characters of nations and of their great men; to observe whatever concerns morals and the proper guidance of life, and especially what has relation to religion.

More than a third of his treatise is devoted to an illustration of these principles, in a series of striking historic pictures drawn from ancient times. Nay more, deplored the lack of a work on ancient history

suitable for youth in colleges, he supplied this lack a few years later by his well-known History ; but, believing "that the natural order demands that in history we advance from the ancient to the modern, and not deeming it possible to find time during the course of the college classes to study that of France," he omitted it. For this Professor Compayré seems disposed to blame him, instead of being thankful that a man already seventy years old, undertook so much out of a pure regard for the interests of youth.

(4) What Rollin suggests for the training of the senses occurs in the 6th Book of his treatise, under the head of Philosophy. In this he includes physics and natural history, together with what we now understand by philosophy. He remarks, "I give the name 'Physics for Children,' to a study of nature which calls for little but the use of the eyes, and which for this reason is in the power of every one, even of children. It consists in giving attention to the objects which nature presents to us, in regarding them with care, and in admiring their various beauties, but without seeking into their hidden causes, which is the province of the physics of the scientist. I say that even children are capable of this, for they have eyes, and do not lack curiosity."

He proposes a series of object lessons drawn from plants and animals, which he recommends to mingle aptly with brief reflections "suited to form the heart, and to lead through nature to religion." He crowns all this by giving sensible practical directions to

teachers how to prepare themselves for giving these object lessons successfully, foreseeing every difficulty that is likely to arise, and striving in this as in every other branch he teaches, to make his treatise a practical guide to teachers.

When we consider that, though reformers like Comenius and Locke had for nearly a century insisted on the proper use of the senses, the scheme of Rollin is doubtless the first definite proposal of a means, pleasant and not over-loaded to accomplish a purpose long considered desirable, and that it is even so well conceived that it might now be profitably copied, we shall find new occasion to admire the pedagogical sagacity of its author.

Finally, what we ought especially to admire in Rollin is the spirit of practical pedagogic helpfulness that characterizes every part of his treatise. Like the skilful architect, he accompanies all his plans with clear and definite specifications. Whether in moral teaching, or in the various belles-lettres branches, or in the training of the senses, he illustrates all the plans he proposes with examples so numerous, so wisely chosen, and so thoroughly presented, as to make their adoption by young professors, easy. In this he certainly had no predecessors among writers on education; nor since his day have there been many who, in this respect, have equalled him.

Section 2d.—Rousseau.

There are few books which a man of taste who is interested in educational questions would be likely to-

read with greater pleasure than Rousseau's *Emile*. There is certainly none in which the reader has need of greater judgment and more constant care, that he may disentangle the valuable educational truths it presents, from the maze of brilliant sophisms and striking paradoxes in which they are often enveloped, and which are the more dangerous because the author himself evidently presents them in good faith, and urges them with an elegant warmth and grace that few can wholly resist. Nor is there any other work on education of which it is so difficult to give a brief but satisfactory account,—an account that shall fairly present the author's most prominent ideas with something of his own coloring, emphasizing that to which he gives emphasis, and overlooking no important error, yet being blind to no important truth.

This difficulty arises in part from his carelessness about consistency; but still more from the fact that his plan of carrying an individual presented under the name of *Emile* through what he considers a typical course of normal development, from infancy to adult years, not stopping even with his marriage, but exhibiting the results supposed to follow from such a training when his hero falls into divers unlooked-for misfortunes,—gives opportunity to this erratic genius to discuss all kinds of social, political, moral, and religious questions, which he introduces so ingeniously that they seem wholly germane to the pedagogic matter in hand, but end often by wholly obscuring it.

It is easy to select a certain number of maxims from

Rousseau, or even sometimes to cull their opposites, and to call them his fundamental pedagogic ideas. This a number of persons have done, but without any very close agreement on what is fundamental. Von Raumer more wisely has attempted an abstract quoted in the author's own words under proper heads, but no abstract however fairly made, can give a just representation of Rousseau. There is in the *Emile* little of educational value which is absolutely new; yet Rousseau, possesses in a transcendent degree the art of so presenting and enforcing old truths that they impress themselves on the mind as they had never done before, and produce all the effect of novelty. In this sense he may be said to have effectually rediscovered and taken possession of several pedagogic regions which had before been sighted rather than appropriated. The pity is that he has so often marred the happy islands on which he plants his standard by peopling them with chimeras.

Who then was this Rousseau, and through what experiences was he qualified to produce a work which has doubtless had great influence on more recent educational history? He was born in Geneva in 1712, his father who was a watchmaker being of French origin, and apparently not distinguished for honesty. Deprived from infancy of a mother's care, he grew up under the charge of an aunt, a volatile and sensitive child, feeding his young fancy with romances, none of which he understood, as he says, but all of which he felt. He was apprenticed first to an attor-

ney and then to an engraver, but showed no capacity for either employment. From the latter he ran away, and henceforth his life was unsettled and homeless. He was for a time in a Catholic school, and became a Catholic, renouncing this faith later when he had gained distinction for Protestantism, but reflecting no credit on either. He entered the service of a nobleman for some time who strove to educate him for a higher position. Then from the age of twenty-one he lived for some years with Mme. de Warens, where he pursued with great zeal philosophic and political studies, gained some knowledge of Latin, and acquired that store of materials of which later he made such brilliant use.

It is needless to go into detail on the steps of his erratic and unhappy career. Whatever of pedagogic experience he had was gained in a few years as tutor in a family ; but he seems always to have been a keen observer of human nature, especially as exhibited in the young, for which his sensitive temperament peculiarly fitted him ; and to this his *Emile* owes much of whatever pedagogic value it possesses. Yet with all his keen perception of child character and child modes of gaining knowledge, he showed no love for his own five children ; for he sent them one after the other, as soon as they were born, to a foundling hospital, leaving no marks by which they might afterwards be identified and reclaimed. This, and many other discreditable circumstances of his unsettled life, we know from his astonishing "*Confessions*," in

which they are detailed with amazing frankness and often with bitter self-reproaches. Yet he considers himself a being innocent of wrong because his intentions were always good, but that he was greatly maltreated by fortune and by false friends.

Despite all the errors and miseries of his career, he gained high reputation as a brilliant and versatile writer. Besides his Confessions, and the *Emile* which is his most enduring work, he wrote several philosophic and political treatises which attracted much attention in that excited period, and which are thought by some to have hastened the French Revolution, whose approach he predicted in the 3d Book of the *Emile* while urging the claims of manual employments on the sons of high-born families. It is more probable that his treatises are rather symptoms of the deep-seated disease which was silently but surely eating out the life of the French monarchy and aristocracy, than influential causes of that bloody tragedy. His melancholy career ended in 1778, not without suspicions of suicide.

The chief pedagogic merit of the *Emile*, in my opinion, is to be found in these four things : viz., (1) that it is the first noteworthy study of child nature and child development from a pedagogical standpoint ; (2) that it everywhere emphasizes the absolute importance of training the senses and bodily capabilities as the only sure basis of memory, judgment and understanding ; (3) that it gives hints and even more explicit directions for the beginning of instruction

from the standpoint of the child's experience, in such branches as geography, physics, and history, the spirit of which methods has entered into modern practice; and (4) that in the 5th Book we have what Dr. Dittes considers the best treatise that has yet appeared on the education of girls.

Every one of these great merits is marred by grave faults of extravagance and paradox, by graver errors of opinion on points often of vital moment, by suggestions of wholly impracticable means, and by expectation of results whose realization would be fatal to the author's ultimate purpose. Hence, that we may better understand the cause of Rousseau's vagaries, and so be the better able to discern and appreciate the truth he delivers, it will be profitable for us to consider his most fundamental errors before discussing the undeniable merits that have just been named. We will confine ourselves to the two that are really fundamental, because they give form and coloring to his entire treatment of the problem of right education, and are the source of most of his paradoxes.

He sets out with the postulate that "all is *good* as it issues from the hands of the Author of things; everything degenerates in the hands of man." In this he intends no reference to the dogma of the fall of man and its consequences; but he means the man of any period, all whose faults, prejudices, and evil inclinations he considers due to the perversion of tendencies which originally were wholly good, by influ-

ences exerted upon him by his fellow men, and that too mostly at an age when he has power neither to resist nor to choose. We need not pause to consider the consequences of this doctrine in regard to man's responsibility for his own mature acts, nor its contradiction of the history of progressive human advancement which on this theory would have been impossible, nor its contravention of the universal opinion of mankind as expressed in their actions ; we have only to observe its effects on his mode of treating the education of the young.

Believing that the native state of man is good, it is a question how to preserve his primitive goodness, and to allow it to develop without perversion. Believing that perversion and degeneracy are due to men and society, it is a question how to protect the child from the malign influence of his fellows. Hence his repeated insistence on restoring the child to "the state of nature," and his constant reference of everything to this assumed state of nature. He means by this, not exactly the savage state, for which in some of his writings he is thought to betray a predilection born of ignorance ; but a fancied state, made up of man's best aspirations after the agreeable, the fit, and that which will promote happiness and perfection, when unchanged by the influences to which he is subjected.

Hence, that this fancied state of nature may be secured, that nought may interfere with conformity to these primitive dispositions to goodness, and, in

short, to assure a *complete control* of all circumstances that may influence character,—his Emile is to be isolated from his fellows until the age of fifteen ; to be reared in the country, communing solely with nature, in company with a paragon of a tutor who shares all with him ; to be subjected to no obvious control save that which comes from the invincible facts and processes of nature ; to form no habitudes, and to shape no opinions save those which the phenomena of nature cause spontaneously to germinate within him ; to gain no moral ideas save that of property as the result of individual efforts ; and, indeed, “to lose time” rather than, in efforts to utilize it, to run a risk of thwarting the work of nature in him.

Emile is not even to know how to read until he is twelve years old, when Rousseau thinks that the processes of physical growth have so far advanced as to afford a relative surplus of energy which may safely be used for his intellectual development. These are a few of the more obvious vagaries into which he is led by his idea of conforming education to a fancied state of nature, and thus promoting the innate dispositions to goodness ; but this idea colors every part of his scheme of education for both sexes.

Rousseau’s second fundamental error controls the plan of his work and its division into distinct parts or Books. It is the assumption that within certain tolerably well-marked limits of age, certain capabilities of our nature so predominate as to be practically unmixed with any powers or tendencies that look to

more advanced stages for their complete development. Thus he conceives four, or more properly five well-marked stages of development, forming the five Books of his treatise.

The first deals with the vegetative age, and includes the care and training of the infant from birth until it is able to talk. The second period ends at the age of twelve, during which he assumes that the senses and the physical nature dominate, without reason and certainly without moral ideas; and this period he would dedicate to securing physical well-being, to thorough training of the senses, and to permitting the child to be acted upon by and to conform himself to the interplay of nature's forces. In the third period, between the ages of twelve and fifteen, judgment and reason are supposed to make their appearance, and this, which is one of the most suggestive Books, is therefore dedicated to a scheme of rapid intellectual development.

The fourth period, between the ages of fifteen and twenty, the critical period as he considers it, is that in which, with the awakening of the human passions, he conceives that the youth first becomes capable of moral and religious ideas, and hence that moral and religious education should here begin. This fourth Book forms nearly a third of the entire work, but lengthy as it is, it is never tedious. It abounds in passages of striking eloquence, some of which have become famous, but is marked by an unusual abundance of his peculiar notions. Some of its religious

ideas which have been generally condemned, were considered of so dangerous a tendency as made it expedient for the author to flee from France to avoid imprisonment, and caused the book to be publicly burned by the Protestants of Geneva as well as by the Catholics of Paris.

The fifth Book which treats of female education under the name of Sophie, the future spouse of Emile, is devoted also to the completion of Emile's education, by his conceiving an ardent affection for one of the opposite sex, by his undertaking foreign travel that he may learn complete self-government and gain the knowledge and experience essential to the exercise of his duties as a citizen, and by his assumption of the offices of husband, father, and member of the state.

Such is an outline of Rousseau's scheme of education, and such the assumption on which it is based. And yet it needs no unusual observation of children and youth to assure any one, not influenced by a theory, that Rousseau's idea of the normal course of human development is wholly incorrect; that, in point of fact, judgment and reason do not wait till the twelfth year before they can be effectually appealed to in matters within the range of the child's experience; and that still less is the youth incapable of true sympathy or real ideas of right and wrong until the age of puberty: indeed, without early subjection to authority, and without proper intercourse with his fellows, he would be practically ignorant of the natural relations on which morality is based.

And yet it is obvious that this erroneous assumption gives the key to the entire plan of his work. Still more, it colors largely his entire mode of treatment of his scheme of education. For example, in Book 2d, he attacks Locke's judicious maxim of using reason with children, with the argument that at the age of ten children not only have no apprehension of reason but have no need of training. "Reason is," he says, "the rein of strength, and the child has no need of that rein. Let him instead feel early on his proud head the hard yoke which nature imposes on man,—the heavy yoke of necessity." Many examples akin to this could be cited to show the manner in which this fundamental error influences his treatment of educational questions.

In my opinion the primal source of most of the extravagances which mar his work, obscure his merits, and furnish to his critics a fruitful supply of injurious quotations, may be found in these two erroneous assumptions which we have just considered; and it is quite possible that when we see that Rousseau's chimerical ideas flow not from mere wantonness and caprice, but are the natural outcome of honest but erroneous convictions in a spirit so fanciful as his, we shall gain a fairer view of the spirit by which he is actuated, and shall be in a better position to pass a candid judgment on his undeniable merits. Moreover, the examination of his errors has afforded a convenient means to give a brief and connected view of the plan and scope of his treatise, any ana-

lytic discussion of which would be both tedious and confusing. We are now in a position to review in a spirit of fairness his substantial contributions to a sound pedagogy.

(1) In the very preface of his treatise, he claims as its chief merit that it is intended to be a profound and careful study of the psychology of childhood. "We do not know childhood," he says. "From the false notions we have of it, the farther we go the more widely we stray. The wisest men confine themselves to what it is important that men should know, without considering what children are in a condition to understand. They always seek for the man in the child without thinking of what he is before becoming a man. This is the study to which I have applied myself the most, so that if my whole method should prove chimerical and false, one may always set out from my observations. I may have seen very ill what should be done, but I believe I have observed well the being on whom we must operate. Begin then by studying your pupils better, for very surely you do not know them."

Again in Book 3d he exclaims, "I wish some judicious man would give us a treatise on the art of observing children." This wish has awaited its fulfilment until recent times, when the trained intelligence of men like Perez and Taine, Preyer and Chas. Darwin, has been turned to the operations of young minds. To Rousseau, however, is due the credit of having first called definite attention to the need of

such a study, and of having done something of value in it himself. The record of this may be found in Book 2d of the *Emile*, where he treats of the training of the senses and of teaching the child by sense experiences his actual relation to the material world, its properties, and its forces.

Here also we may justly admire his acuteness in observing that the speech of children has often "a different meaning for them and for us," a fact to which he rightly attributes many of the amusing sayings of children, and which he thinks causes errors sometimes of lasting consequence. In this connection, too, it may be remarked that we owe to Rousseau a vigorous plea for care in forming the early speech of the child, and in assuring a right use of the organs of speech. It would be easy were it needful to multiply quotations showing Rousseau's deep appreciation of the truth that any reliable science of education must have its foundations in a thorough study of the operations of the young intelligence.

(2) Rousseau was by no means the first to call attention to the importance of training the senses and bodily capabilities. We have already seen the emphasis laid on this by Comenius and Locke, and that even the cautious and conservative Rollin would have the exercise of the senses cared for during the entire childhood and youth, and expects from this care noteworthy results. But no one before nor since Rousseau, not even Pestalozzi, has like him made his entire scheme of education depend on sense and bodily training, or on the results flowing from this.

He proposes that to the twelfth year the entire activity of the child shall be given to this kind of training, no literary tasks, no learning even to read, unless he desires it for its present obvious utility, but all care to be devoted to the senses and the body, and to their development. "Do not exercise strength only," he says, "but also all the senses which direct it; derive from each all the aid possible, verifying the impressions of one by another; measure, count, weigh, compare; do not use strength until after having estimated resistance, and always let the estimate of the effect precede the means."

But besides this thorough cultivation of the senses and muscular adaptations, insisted on by him during the period of childhood, it should be remembered that Rousseau's entire scheme of advanced education presupposes trained senses and physical capabilities obedient to the will, and calls for their thorough use as an indispensable means for gaining usable knowledge, the only kind of knowledge that he values. In this line is his insistence on manual training. It is only within the last score of years that efforts have been made to give to youth some dexterity in the use of common tools; yet Rousseau, adopting a suggestion of Locke, urges manual training at much length and with great eloquence, not only as a useful means of education, but also as a resource in unforeseen misfortunes; and it is in this connection that he makes his celebrated prophecy of the near approach of an age of political and social revolutions.

(3) In intellectual education as a whole, he emphasizes all the fundamental principles which are now commonly accepted in instruction, viz., thorough use of the observing powers, the self-activity of pupils instead of mere receptivity, advancement by easy and natural steps, the cultivation of mental power rather than the loading of memory, holding the interest of pupils by the presentation of proper subject-matter, the avoidance of over-crowding and precocity, of sham knowledge and superficiality, and in general, conformity to the powers, needs, and individuality of the child. None of these principles were wholly new: every one of them had been advanced by preceding Innovators: but Rousseau vividly exhibits them all in action, and exemplifies their possibilities in the development of the child. In his hands they are no longer abstract propositions, but embodied and therefore impressive realities.

Yet the exemplification of these great principles is by no means the measure of his services to intellectual education. His most significant addition to the art of instruction, is his suggestion of the methods of teaching such subjects as geography, physics, history, civics, and drawing. In physics, for example, he would begin with the observation of familiar physical phenomena, in which Emile does all the work and makes the discoveries with an imperceptible guidance of his tutor, devising and making apparatus to verify the results of his observations, and thus, slowly indeed but surely, reaching the conception of physical uniformities of operation, or laws.

In the study of geography, he would set out from the terrestrial features of the home; in history, from biography; in civics, from the most familiar relations of men to their fellows; and in drawing, from attempts at delineating common things rather than from copying pictures already made. Save in the case of history, the first effective suggestion of these sensible modes of procedure seems to have come from Rousseau, and their adoption marks an important advance in the art of instruction.

(4) The 5th Book of the *Emile* in which Rousseau gives his ideas of the proper education of women, has the fewest glaring faults, and is the most satisfactory part, of the entire treatise. The aim that he proposes for this education, viz., to fit woman to please and interest man, to be his complement and fit companion, and to make his home pleasant, is not a very lofty one according to some modern ideas; yet despite some faults, Dr. Dittes is right in considering it one of the best treatises on female education that has yet appeared.

He draws the picture of the girl as she appears to him to be by nature, and again as he thinks she should be when properly educated, with his usual skill and grace. Like Fenelon, he objects to a conventional education for girls, and for the like reasons. Rather he would have them educated at home under the eye of the judicious mother, by whose wise guidance they should be taught to know the world as it really is, to penetrate its unreality, and to gain wisdom to avoid

its allurements. Home and family life are, in his opinion, the sphere of good women, to a taste for which they should be trained by the example of good mothers, and by a sweet home life throughout their youth. For success within this sphere they should be carefully educated, by the development of taste that they may please all within its circle, by acute knowledge of human nature and its springs of action, that they may manage with tact in all social relations, and by a proper cultivation of intellect and heart, that they may be interesting companions and retain the enduring esteem of husbands and friends by their intelligence and unpretending virtues.

He would have the moral and religious education of girls very early begun, because, as he says, "If one waited until they are able to discuss those deep questions methodically, we should run the risk of never discussing them at all"; which is about equally true of both sexes, though Rousseau's preconceived theory blinds him to the fact. In justice to him however it should be added, that he thinks the religious beliefs of women are more subject to authority, and their conduct more subject to public opinion, than is the case with men; and that hence it is needful only to state to them clearly what is to be believed and done; —a statement which makes his inconsistency in the religious education of the two sexes, a trifle less glaring.

Moral and religious instruction, he would not permit to be gloomy and irksome: it should be bright

and brief, exact and reverent, and be constantly impressed by corresponding example. But “the idea of duty has no force unless we join to it motives which impel us to fulfil it. Hence make girls feel all the value of wisdom and virtue, and you will make them love them,” by showing “that their virtues and their duties are the source of their pleasures and the foundation of their rights.”

The idea of the existence of a Supreme Arbiter of human destinies, whose children we all are, and through whom all human rights and duties are rooted in the very nature and relations of things, he thinks should be early impressed on girls and made habitual with them. But if on girls, why not equally on boys? We have seen his reasons, but they are obviously insufficient. Were his vague idea expanded into the form of an argument, it would take this form: Reason does not awake till about the age of twelve; but girls will believe without reason while boys will not; hence make a wide difference in the time and mode of their religious and moral education. In this as in other things, he insists “that everything consists in re-establishing or preserving the *natural* sentiments,” repeating his fundamental idea that man by nature is wholly good, and that his errors and corruptions spring from education and external influences.

As in the education of the boy he would make Robinson Crusoe his chief text-book, so in Sophie’s hands he would place Télemaque that she may form from it her ideal of the heroic youth, who alone shall be worthy of her feminine perfection.

Such then appear to me to be the most salient and fruitful errors, and such the most important teachings of this remarkable book, a book which has inspired many reformers of education like Basedow, and Pestalozzi, and Froebel, and which is said not to have been without influence on philosophers like Kant. It is not only the most influential pedagogic work which the 18th century produced, but it is also the best index of the interest with which educational questions were regarded in the period of feverish unrest which preceded the outbreak of the French Revolution. Other French thinkers of more philosophic character, like Condillac, Helvetius, and Diderot, contributed to pedagogy ideas all of which are of interest, and some of them, of value, e. g., Diderot's principles in the selection and arrangement of studies, and Helvetius's belief that all men who are ordinarily well organized have equal potential talent; but as these works are little known outside of France, it does not seem expedient to dwell upon them here.

Section 3d.—Immanuel Kant.

The father of the famous German philosopher Kant was a saddler, and is said to have been of Scotch descent, to which fact the curious in such matters might be inclined to attribute the metaphysical genius of his son. Immanuel was born in Königsberg in 1724. He received his early education in his native place, and after some years' experience as a private tutor, he took his degree at the university of Königsberg in 1755. The next fifteen years of his

life were spent in lecturing on metaphysics and mathematics, during which he was offered and refused the chair of poetry. Finally in 1770 he was made professor of logic and metaphysics in his native university in which he passed the remainder of his life, dying in 1804.

Such was the inflexible regularity of his habits, and such the tenacity of his affection for the city of his birth, that during the entire period of his professorship he is said never once to have set foot out of Königsberg. The uneventful record of his life is, that he was born, lived fourscore years during which he never married, did a famous work in his chosen line, and died full of honors as of years,—all in Königsberg.

As professor of philosophy, he gave lectures on pedagogy, which from their form in his collected works, would seem to have been more than once remodeled, though without material change in their fundamental ideas. Kant evidently entertained a lofty idea of the power and effects of education. "Man," he says, "can become man only through education; he is nothing but what education makes him, and he can be educated only by man." Believing thus, he more than once expressed the wish that an experiment might be made under favorable conditions, remote from the interference of parents and princes, to test how far education can be carried and what may be its results. "This only," he says, "is the cause of evil, that nature is not brought under rules. In man lie only the germs of good."

Hence the need of an education directed according to an ideal of humanity and its entire destiny. Towards this, however, he admits that mankind can approximate but slowly; "for insight depends on education, and in turn education depends on insight, which can come only from the transmitted experience and knowledge of many generations." As a step in the right direction, he proposes that children should be educated, not merely for the present state of things, but for the future possibly better condition of the race.

But "if children are to become better than their parents, pedagogy must become a *study*, otherwise nothing is to be hoped for from it." "Unless mechanism in education is changed to science and thus puts forth *harmonious* efforts, one generation might pull down what another had built up." Hence "the regulation of the schools should depend only on the judgment of the most enlightened judges.—Only through the efforts of men of more extended purposes, who have at heart the elevation of the world, and who are capable of the idea of a future better condition, is the gradual approximation of human nature to its destined end possible." "Behind education lies hidden the great secret of the perfection of human nature."

In the view of Kant education is made up of discipline, cultivation, and the attainment of prudence and morality. The human being needs discipline to tame his original savagery, to guard him from departing

from true manhood through yielding to animal impulses, to bring him gradually to all the native dispositions of humanity, and finally to lead him to the right use of his own reason. He needs cultivation that all his capabilities may be adapted to the accomplishment of any desired end ; and of these two, Kant says that early discipline is the more vitally necessary, for "He who is not cultured is rude, while he who is not disciplined is barbarous, and neglect of discipline is a greater evil than neglect of culture, for this can be remedied later whilst that can never be."

Again man needs to be made *prudent*, that he may be fitted for the society of his fellows, may be esteemed and have influence through the possession of good manners, politeness, and a worldly wisdom in virtue of which he is able so to bring his talents to bear upon other men as to make them helpful to his purposes. Finally he should be made *moral* that he may be disposed to choose only really good ends, ends which are held in esteem by every one and which can be the ends of all under like conditions. "How exceedingly important it is," he says, "to teach children from their youth up to avoid vices, not merely because God has forbidden them, but because they are in themselves worthy to be avoided"; also to reverence and regard the rights of men, and especially of the poor and lowly. To this last end, Kant would have a catechism of right prepared for schools and an hour given for its daily study, "that the children may learn and take to heart the rights of

man, that thing most valued by God (Augapfel) on earth."

From Kant's ideal of education, it is obvious that his chief interest centres in character-development, which he terms *practical* education because it has to do with conduct and the training of the will. Through this, the young human being is to be fitted to become a self-directing and free-acting man, by learning so to control his selfish inclinations that he may be fitted to become a member of society, by attaining freedom of the will through the habitual recognition of its limitations as well as through its habitual proper use, and by gaining an inward value and worthiness of his own, and never belittling this worth of humanity in his own person by vices or mean compliance.

The great problem of education, in the view of Kant, is how to combine subjection to legal compulsion with the proper use of individual freedom. "I should accustom my pupil," he says, "to endure a limitation of his freedom, and at the same time guide him in making a proper use of his freedom. Without this, all is mere mechanism, and the youth released from tutelage does not know how to make a proper use of his freedom." He recommends that from early years, the child be left free to act where he will not ignorantly hurt himself or interfere with the rights of others, that he be taught that he cannot gain his ends save by permitting others to gain theirs, and latest of all that he be shown that whatever compulsion is imposed on him is in the interest of his own true

freedom, guiding him to its *orderly* use that he may not be dependent on the care of others.

The will is not to be broken, but trained to yield to natural obstacles. "Breaking of the will generates a slavish way of thinking; natural opposition on the contrary brings about tractableness." Both in this sentence and in his discussion of punishments, Kant strikes the key-note of Herbert Spencer's chapter on Moral Education.

Mere empty emotion, and a sentimental sympathy issuing in nothing, he would discard as factors in education: "Let the child, he says, be full not of feeling, but of the idea of duty;—let him learn to put self-respect and inward worthiness, in place of the opinions of men; inward worth of action and accomplishment in place of words and emotions; reason in place of feeling; and cheerfulness and good-humored piety in place of a cruel, timid, and gloomy devotion."

What Kant considers the vital traits of an estimable character are these four, 1st obedience, i. e., subjection to lawful authority and to the idea of duty; 2d truthfulness which he considers "the essential foundation of character;" 3d sociality or inclination to friendship with one's fellow men; and 4th candor which he calls "a modest self-confidence." This statement of what should be considered the essential traits of a worthy character has great interest as originating with the greatest of philosophers.

Early religious ideas, he declares, should be inculcated, not as matters of memory or imitation, but as a

general law of duty rooted in the nature of things and independent of the humors of men. Religion is applied morality, that is, morality applied to the knowledge of God. "We must first begin," he says, "with the child from the law which it has in itself. Man is blameworthy in himself when he is sinful; this is grounded in himself, and not because it is forbidden by God." The divine law must appear at the same time a law of nature, for it is not arbitrary." The idea of God is best given under the analogy of a Father under whose care we are, from which naturally springs the conception of all men as one great family, and the cosmopolitan sentiment on which Kant lays stress. A few ideas of the Supreme Being should thus be given to children that they may know when they see men pray why and to whom they pray, and may be prepared to do the same understandingly when they reach the age of maturing reason.

So far as concerns the methods of education, Kant is in substantial agreement with the essential principles of the educational reformers. Himself the veriest creature of routine, he seemingly agrees with Rousseau in discouraging the formation of habits that the pupil may be free from their tyranny; but the connection seems to show that this agreement is only apparent, and that Kant has in view only sensual indulgences.

Again by a judicious definition of the difference in intention and spirit of work and play, he dissipates the oft-recurring notion of making learning a kind of play, which, when it means anything else than mak-

ing learning pleasant by adapting it to the capacity of pupils, and investing it with a living interest, is certainly a pleasing delusion.

Finally, by a sagacious question as to the correlation of the course of development of the individual with that of the human race in time, Kant gave the hint * which Herbert Spencer, ascribing its origin to Comte, has wrought up into an ingenious theory in his work on Education ; and which presents an interesting analogy with Agassiz's generalization that the embryological, i. e., physical development of the individual corresponds with the course of development in time of the class to which it belongs.

The pedagogical treatises of these three eminent men, not only represent the best educational thought of the 18th century, but are types of very unlike kinds of ability. Rollin, calm and judicious, systematic and practical, illumines with the clear light of pedagogic insight every educational problem that he treats, and might safely be placed in the hands of a young teacher as a reliable guide. The brilliant and versatile but erratic Rousseau dazzles and bewilders, quite as often as he instructs those whom his eloquence attracts ; but far more than either of the others he *inspires* men to strive for the improvement of society by a more rational training of the young. The profound intellect of Kant displays its power, not in any systematic treatment of education, but in the establishment of great fundamental points of view, and

* Kant, *Samtliche Werke*, Vol. IX. p. 375.

in striking suggestions which he left to others to elaborate. They are remarkable educational representatives of a striving but unsettled age, of which Kant voices the aspirations, Rousseau typifies the tumult of effort, and Rollin represents the purpose to achieve the practical.

CHAPTER XII.

VI. BASEDOW AND THE PHILANTHROPINIC EXPERIMENT.

Basedow who, with his coadjutors Campé and Salzmann, became famous through his educational experiment in the Philanthropinum at Dessau, was born the son of a wigmaker in Hamburg, in 1723, and died in 1790. His father was a stern man who seems to have seen no signs of promise in his son until he had run away and attached himself to a gentleman in a distant place. This man soon discovered that the runaway was a lad of quite unusual ability. Hence the father, first seeing his son aright through another's eyes, persuaded the boy to return, and put him to school at a gymnasium. Here he earned small sums of money by writing poetry and tutoring other boys, and spent it in dissipation, presumably of a mild type.

Later he went to the university of Leipsic to study theology with the purpose of becoming a clergyman. He however attended but few lectures, studying by himself instead, in a desultory and unordered fashion, and reading philosophic treatises from which he picked up a choice stock of heterodox opinions that barred him out from his destined profession, and colored all his later efforts and fortunes. Next he became tutor in a family where he showed his peda-

gogic instinct by devising a method of teaching Latin which later he published, and by which he taught first himself and then his pupil. At the age of thirty he became professor in an academy for noble youths, but gave such offense to the patrons of the institution by a heterodox treatise, as caused his transfer to the gymnasium at Altona. Here, too, untaught by experience, he published other heterodox and controversial pamphlets which put him and his family under a social ban, and caused them to be excluded from the communion to the great distress of his wife.

In 1768, he published a treatise on Schools and Studies, and at about the same time, an announcement of an elementary book of human knowledge, for whose publication he appealed for money to kings and princes. The money was obtained and the book appeared, preceded by a Method Book for fathers and teachers. The Elementary Book was a kind of 18th century *Orbis Pictus*, illustrated by a hundred engravings, some of them astonishing in the matters depicted, and was intended to teach children nature, morals, natural unsectarian religion, the duties of citizens, and business affairs, without weariness by appealing to sense experiences. In 1770, with the aid of an assistant, Wolke, he began an educational experiment on his infant daughter Emilie, apparently as a test of Rousseau's theories. Of this child Wolke is claimed to have made an infant prodigy who, at the age of five years, besides having an unusual knowledge of things, gained through the senses, was able to speak

German, French and Latin, knew God as a father, and was fond of domestic duties. She seems to have played a considerable part as an example of what right methods of education were supposed to be able to accomplish.

It should be noted, however, that in the Method Book, Basedow in some respects departs widely from Rousseau's vagaries, especially in regard to the time when religious and intellectual education should begin, and in insisting that it is best that the child should be educated among children. He wisely says, "Are not the mutual duties of those who have like rights, those in which we need a manifold practice? But can a child that is brought up in solitude without playmates be practised in these duties by his tutor in any possible way?"

In 1771 the prince of Anhalt-Dessau invited Basedow to Dessau, where with the aid of this prince and large contributions of money from other high quarters, in 1774 he founded his Philanthropinum, an institution in which an experiment was to be made for a thorough reform of the methods of education on the lines laid down by Comenius, Locke, and Rousseau. Although its name would claim for it a purpose to benefit mankind, it was in reality a boarding school for the rich, so that Dittes derisively calls Basedow's projects "the pedagogy of the boarding school."

In 1776, to advertise the Philanthropinum more widely and to obtain more money for his projects, he

sent out an "Invitation" to an examination to be held in May, in which the results of their teaching should be shown. In this "Invitation," he declares it to be his aim in education "to form a cosmopolite whose life shall be as harmless, as devoted to the public good, and as contented, as it can be shaped by education....The art of all arts is virtue and contentment." He promises a colorless religion that will be equally acceptable to all. Latin, French, and German, mathematics, and a knowledge of nature and art are to be thoroughly taught with very little memorizing; and double as much progress in studies as is usual, is promised by an unforced study, through harmony with the philanthropinic training and mode of life; while much culture of sound reason is to be gained by the practice of a truly philosophic mode of thinking.

He undertakes to teach children to understand and read a language in six months, and to make them fair scholars in it in a year, and he declares that he has already done it,—alluding probably to Emilie. He also says that "he has devised methods to make the work of learning three times as brief and three times as easy and pleasant as usual. All sciences, through uniformity of text-books, are to be put into such relations that one part shall always shorten and lighten another; and only that which is for the common good is to be taught out of each science." Verily we seem to hear the voice of Ratich, addressing us after a sleep of a century and a half! And yet

Basedow, unlike Ratich, is not merely feeding us with vague promises and proposals, but is giving too sanguine accounts of an experiment already in progress, and mistaking fervent hopes for present accomplishments.

The proposed examination was held ; many noted persons resorted to it from different quarters ; favorable reports of its results were published ; and the next year Kant wrote an eulogistic article on the Philanthropinum calling for a revolution in education in place of a reform, and predicting that the Philanthropinum would teach and inspire teachers, and thus "be like seed corn." The rectors of *gymnasien* however opposed, and Herder, then at the height of his fame, likened the projects of Basedow to an attempt to raise a forest of oaks in ten years, by cutting out their main roots, and declared "he would not entrust to him calves to educate, not to speak of men."

Yet despite this opposition, the experiment seemed on the high road to an assured success. Neuendorf, the overseer of the school, strove like Trotzendorf to make it a little republic in which the pupils should make their own laws and feel their need of them ; manual labor was introduced, following the idea of Rousseau ; the numbers increased, and in 1782 there were fifty-three pupils from all parts of Europe. Other schools sprang up in imitation of it, of which one, founded in 1784 by Salzmann at Schnepfenthal in Gotha, still exists. And yet, before the end of the century, not only the original Philanthropinum had

become extinct, but also all its imitators save the school at Schnepfenthal.

The cause of its rapid decline may doubtless be traced rather to grave defects in the character and claims of its projector, than to any lack of worth in the objects that were sought to be attained, or to any lack of necessity that efforts should be made for their attainment. The object that was sought was a radical change, or as Kant phrased it, a revolution in the current methods, purposes, and adjuncts of education. And that a radical change was necessary is evident both from the testimony of Kant, and from the description which Von Raumer gives as holding good for the education of the times with but few shining exceptions.

It was an educational system in which grammar and barren memory played a chief part; in which eyes were used only for reading and writing, and ears only to listen to the dull routine lessons and coarse tirades of schoolmasters; in which school rooms were dismally gloomy, and punishments frequent and savagely severe; and in which youth, hampered and tricked out in ornamental clothing, with hair elaborately dressed and smeared with pomade, and with daggers at their sides, were driven through a joyless round of uncomprehended studies. All this Basedow in the Philanthropinum undertook to change, and thus to set an example to all Europe of the direction that education, following the precepts of Comenius and Rousseau, should henceforth take in care for body, mind, and soul.

In his methods there are doubtless many absurdities and much that is overstrained. This is especially true of some things introduced in moral education, and of the instruction in "natural religion," in regard to which he was what we should now call a *crank*, and into which he introduced an elaborate and silly ceremonial. There was also a lack of frankness bordering on charlatanry in his treatment of Latin. He believed in teaching only useful things, and he thought Latin had wholly ceased to be useful; yet avowedly for financial reasons, he made Latin very prominent in his school, thus publicly fostering while privately contemning it. Had he shown the same worldly wisdom and spirit of adaptation in other respects, in conforming his purposes and methods somewhat to the exigencies of the times, the Philanthropinum might have had a different and more-enduring history.

Yet, though this immediate experiment failed, it was far from coming to naught. An influence went out from it which spread through Germany, and was not without effect in other parts of Europe. Many books were written disseminating its ideas, one of which, "The Swiss Family Robinson" written by Campé, is still a favorite with the young. The attention of men was called to the folly and uselessness of many things that prevailed in the schools; the real merits of the philanthropic ideas worked their way into education through men who avoided their defects; "peculiar pedagogic thoughts and views were called

forth in men by so great a pedagogic reform"; and minds were made receptive for the efforts of Pestalozzi, with whom began the educational revolution for which Kant longed. Indeed Basedow's bold, confident, and assertive spirit had gained such hold on the minds of men, that even when discredited by disaster, it left them in an expectant attitude with regard to education wholly favorable to any future reformer. Thus his experiment was a success, even in its failure.

The character of Basedow has been alluded to as the undoubted cause of the brief life of the school he founded. Although his ability and his eloquence were remarkable, yet his character was marred by defects which unfitted him for a leader in an educational enterprise. His skeptical and disputatious though evidently religious spirit, betrayed him on the most important occasions into a strange lack of worldly prudence. The young Goethe, who in 1774 was his travelling companion, gives some curious illustrations of this and other traits of his character. On a tour whose object was to obtain money from the benevolent, and in which success depended on the favorable impression he should make, he continually affronted people, and closed their purses with their hearts by uncalled-for ventilation of his skeptical ideas about the Trinity.

He was fond of teasing people by running counter to their tastes. Thus seeing Goethe's dislike for the vile tobacco that he smoked, and the viler-smelling

tinder with which he often relighted it, he took special pleasure in filling their room with the nauseous fumes. This same trait reveals a coarseness of nature which marks also some of his works on school subjects, showing a lack of delicacy which was little fitted for success in a great educational experiment involving striking innovations, whose acceptance demanded the utmost fineness of touch and refinement of feeling,—such as we have remarked in Fenelon.

Even more injurious than all else to the fortunes of his school was his over-sanguine disposition, which betrayed him into describing ideas that he had conceived as though they were things already accomplished. Examples of this have already been given in speaking of his “*Invitation*.” By his bold assertions, extravagant expectations were excited, and when these were not realized, a disappointed public was little disposed to believe that the institution had any real merit whatever.

The career of Basedow, like that of Ratiel, affords a striking example of how completely the personality of the educator, especially when he undertakes the role of a reformer, colors all his work and brings with it success or failure to his efforts. He who must in some respects run counter to the prejudices and habitudes of men, has need of the most consummate prudence and tact,—prudence that he may rouse no needless opposition, and tact that he may win men to coöperation by so presenting new ideas that they may seem like the embodiment of the vague aspirations of

his hearers,—that thus, while he is really accomplishing his own purposes they may seem to be accomplishing theirs. Not only was Basedow singularly lacking in these two qualities, so essential to the successful reformer, but also others of his personal characteristics contributed to the failure of his well-meant efforts. In the career of Pestalozzi, we shall see an illustration in an opposite sense of the influence of the educator's personality,—in a life of successive failures caused by peculiar defects, yet crowned with enduring renown by virtue of great and uncommon excellences of character.

In conclusion it may be said that the ideas which Basedow especially emphasized in his experiment, present few or no novelties to one familiar with previous educational history. The idea of following nature in all things, religion included; of appealing in all possible cases to direct observation; of giving careful training to the body, and to the physical capabilities, by manual work, and by dress permitting free movement; of teaching only useful things; of educating the intellect that the feelings may gain right direction; and of guiding the young by love instead of by blows,—are each and all recognizable as the common property of several Innovators; but what they held as theory, he endeavored to exemplify in practice. The value of his idea of training the young to be cosmopolitan rather than patriotic may well be doubted; and his effort to inculcate a mere colorless religion, bearing no sectarian tint, however laudable

may have been its purpose, was not merely puerile in its method, but was strongly though unconsciously tinged by his own peculiar heterodox views.

The influence exerted by this experiment, in an age of so high-wrought expectations, was doubtless great, even though it failed ; and Pestalozzi was the inheritor of the results of that influence.

CHAPTER XIII.

VII. PESTALOZZI AND HIS WORK.

The career of Pestalozzi is one peculiarly difficult to understand. The anomaly of enduring success amidst continuous failures is apt to strike the observer as a puzzle that hardly admits a rational solution. The explanation which Dr. Dittes essays to give of this curious phenomenon, is therefore worth quoting as that of one of the foremost among German educators, and of one who strikes the key-notes of Pestalozzi's character with intelligent sympathy. It is as follows: "The most influential of all German pedagogues has been a man who, neither through general culture, nor through clearness of pedagogic insight, nor through mastery of method, nor through talent for organization and direction, nor finally through enduring creations, towered above his great predecessors and contemporaries, or even reached their level. On the contrary, in all these respects he remained far behind other educators. What made him great was his inexhaustable love for the people, his pure heart, his glowing enthusiasm, his restless efforts and sacrifices for human welfare through human culture, and this too at a time which had finally gained a sense for educational ideals, and

hence elevated the promoter of such ideals to undying renown."

That is to say, through the efforts of men like Rousseau and Basedow, the times were ripe for educational reform; and the unselfish love and fiery enthusiasm of Pestalozzi fitted him to express the needs of the times and to enforce their remedy, despite his lack in most of those qualities which are usually thought essential to make up the successful teacher. A review of the career of Pestalozzi will, I think, convince us that Dittes' solution of the enigma of Pestalozzi's fame and enduring influence, is probably as satisfactory as any that can be offered.

John Henry Pestalozzi was born January, 1746 in Zurich where his father was a respectable physician. He had the misfortune when only five years old to lose his father, of whose masculine influence a boy so peculiarly constituted as he, stood in special need. Under the care of his mother and of a faithful maid, he grew up a clumsy and awkward, yet withal good-natured and obliging lad, whom his school-fellows nicknamed Harry Oddity von Foolville. He passed, seemingly with average credit, through the various grades of the Zurich schools; showed himself quick to grasp ideas, but very careless about the forms in which he embodied them; received through one of his teachers, Bodmer by name, a strong bent to natural history, and towards caring for the happiness and freedom of the people; and was powerfully stimulated by reading *Emile* which just then was published.

The educational views of this book doubtless impressed him the more from their strong contrast with what he was experiencing ; whilst its political ideas kindled in the heart of the boy, already disposed to the love of liberty by the teaching of Bodmer, a hatred of the aristocracy which was never wholly quenched.

He was destined for the ministry, but is said to have failed completely in his first attempts to preach. It was unfortunate for his earthly happiness that he permitted himself to be discouraged by these early failures ; for those who observe the touching and persuasive eloquence of his later addresses, and the impassioned fervor which glows in many passages of his educational works, cannot fail to be convinced that his peculiar abilities would have found their fittest place in the church. The church, however, lost one who would have proved a burning and shining light, and he turned to the law. This profession did not harmonize with his ardent love for his fellow men ; hence in his twenty-second year, he abandoned literary ideas altogether, bought an unpromising tract of land, built a house which he called Neuhof, and betook himself to the cultivation of madder.

Here in 1769 he married Anna Schulthess who brought him a considerable fortune, and with whom he lived nearly fifty years in most harmonious union. The letter in which he declared to Anna his sentiments and wishes, and which is quoted in some of his biographies, is remarkable for the frankness with which it discloses all his faults and weaknesses, of

which he was fully conscious, as also his aspirations for the future, from which he looked for a troubled life. These anticipated troubles came early to the young couple; for the madder enterprise proved a costly failure, wholly, as Pestalozzi confesses, through his own lack of business capacity. Then in 1775 he converted his home into an industrial school for poor children, who were expected to pay for their support by field labors and spinning and weaving, while receiving school instruction at stated hours.

From the outset this undertaking met with difficulties, from the lack of skill and docility of the pupils, from the stupid interference of parents who frequently removed their children as soon as they were decently clothed and became useful, but most of all from "the lack of solid knowledge of fabrics, men, and business" on the part of its manager. The school finally went to pieces in 1780, and left Pestalozzi impoverished and deprived of confidence in himself, but with a better knowledge of the class which he desired to benefit, and for which his benevolent feelings suffered no abatement.

In the eighteen years which followed at Neuhof, years often of great privation, Pestalozzi laid the foundation of his reputation as a writer on education by the publication of two works which contain the fundamental ideas of all his later efforts. One of these, "Leonard and Gertrude," which appeared in 1781, is by far the most widely known of all his works. In the form of a homely but touching story of the life in

a Swiss village, in which Gertrude acts the part of the good angel, it was intended, in the words of its author, "to promote a better education of the people by setting out from their real situation and their natural relations." "It was," as he says in the preface to a second edition published in 1803, "my first word to the heart of the poor and forsaken in the land, my first word to the mothers of the land and to the heart which God gave them to be to their children what no man on earth can be in their stead." It was the first expression of an idea which he never abandoned during his long life, to place the first education of children in the hands of mothers, and to so methodize and even mechanize instruction as to render this possible. This, which was also the idea of Comenius, was the fruitful germ from which much later sprang the practicable scheme of Froebel, the kindergarten.

This work attracted great attention, and roused among his friends the hope that he might be a successful novelist. This, however, was not the kind of success that Pestalozzi craved; and the next year, seeing that the interest of his story had withdrawn attention from the educational ideas he wished to impress, he wrote "*Christopher and Alice*" to accent them more fully. This book gained little notice, and probably failed entirely to reach the class he had chiefly in view. During the succeeding years which cover a period of wars and tumults for Europe, most of his writings were of a political and ephemeral character, yet with a thread of appeal for better popular education running through many of them.

In 1798, the idea occurred to the government officials, on account of his incessant political activity, that he probably wanted some office to keep him quiet; but to their surprise, when asked what post he would accept, Pestalozzi answered, "I wish to be a schoolmaster." He was taken at his word, and in September, 1798 he was sent to Stanz to collect and care for the poor children who had been orphaned and made homeless by the war. Here then at the age of fifty-two, and with no pedagogic experience save the luckless industrial undertaking at Neuhof, Pestalozzi entered on his illustrious educational career.

He soon collected in a deserted convent, which was given up to his use, eighty homeless children. Ignorant and neglected, ragged and filthy, brutalized by extreme want, and afflicted with various nameless ills, they were unpromising subjects for an effort at adapting the conditions of home life to the needs of numbers assembled in a school, such as Pestalozzi had in view. "A person who had the use of his eyes," he says, "would not have ventured it; fortunately I was blind, otherwise I should not have ventured it."

Here then with only the aid of a housekeeper, he entered on his task. The children were taught and cared for only by him. He slept in their midst; he performed for them the most menial services; he prayed with them, and strove to nourish in their hearts the germs of good principles: he combined manual labor with instruction that they might become able to support themselves. Forced by the necessity of the

situation, he devised the plan of concert recitation and a system of monitorial teaching, in which the few who were able to read were set to teach those more ignorant.

His unselfish labors for these desolate children were meeting with unlooked-for success, when the return of the French army in June, 1799, scattered the pupils, and their overtasked teacher gained a brief period of rest. Later in the same year, he was permitted to teach in the primary schools of Burgdorf, a town of some importance in the canton of Bern. Here he continued his experiments in elementary instruction, encountering some opposition, partly religious, and partly envious. He says, "It was whispered that I myself could not write, nor work accounts, nor even read properly. Popular reports are not always wholly destitute of truth; it is true that I could not write, nor read, nor work accounts well." What was there then in him to fit him for his work? Ramsauer, one of his pupils at this time, and afterwards a teacher of some note, speaks of "his sacred zeal, his devoted love which caused him to be entirely unmindful of himself, which struck even the children, made the deepest impression on me and knit my childlike and grateful heart to his forever."

After less than a year of this teaching, he opened a school in Burgdorf in conjunction with Krusi and others, which was the germ of the famous Pestalozzian Institution. In 1805, this school was removed to Yverdun, and soon gained a European reputation.

Pupils flocked to it from various nationalities ; ardent students resorted thither to learn the secret of its methods ; and its fame attracted many distinguished visitors. In 1809, von Raumer, the future historian of education, spent some months in the school with a friend, and his account of it is therefore an inside view, evidently candid but not highly eulogistic. At that time there were 165 pupils, of whom less than half were Swiss, the rest being German, French, Russian, Italian, Spanish, and even American. There were besides thirty-two persons in the institution to learn its methods.

But though the school was famous and apparently flourishing, the seeds of discord were early sown, which should ultimately bring disaster. For a time the self-sacrificing spirit, the unselfish zeal for human improvement, and the untiring devotion to duty of its director, inspired in his associates kindred sentiments, and united them all in harmonious efforts for the great cause in which they were engaged. But as the numbers increased, and new elements were introduced into the school, the effects of Pestalozzi's "unrivalled incapacity for government" and management began to make themselves felt. A strong hand was needed to guide a large establishment, and unhappily the man on whom the director relied for the strength which he knew he himself lacked, seems not to have been gifted with conciliatory manners. Hence disaffection and discord arose, and invaluable teachers were lost.

Again, Pestalozzi's eager desire that the results of the teaching should be shown at their best to the many distinguished visitors, that thereby his purpose in the spread of better methods of instruction might be promoted, insensibly led to an undue attention to those branches which could most easily be exhibited to visitors; whereby those moral and religious characteristics which mature only in silence, were measurably less emphasized, and the education became one-sided. From this cause also heart-burnings arose among the teachers, since it was easily seen that those among them were most favored whose work would make the most impressive display.

Pestalozzi struggled long against these tendencies, but in vain. The evils springing from the limitations of his own nature, were too strong to be overpowered by his unselfishness and his unfailing love. The institution declined, and was finally closed in 1825, after an existence of about twenty years. The old man, already verging on his eightieth year, retired to his old home at Neuhof where his only grandson resided; and there, after writing his last two works, one of which bears the pathetic title "The Song of the Dying Swan," he died in February, 1827, having just completed his 81st year.

So much has needed to be said on the incidents of his life, even in a brief sketch, because his life and character are so intimately intertwined with his educational efforts, that the influence which the latter have exerted can hardly be understood apart from the

former. He taught and influenced even more by what he was and what he desired than by what he did ; for, from his want of disciplined skill, and from the peculiar enthusiastic eagerness and lack of foresight which marked his nature, his practice often stands in the most imperfect relations with his theories and his real purposes.

Witness, for example, his frequent violations, both in his teaching and in some of his method books, of his own fundamental principle, of proceeding in all possible cases from the observation of things, and using language only to express ideas already conceived. His so-called object lessons are often mere lists of names of things by no means present, accompanied by other lists of properties by no means observed. It might be said that they were intended as guides only for the subjects to be selected by teachers ; but von Raumer's observations show that these compends were not so used in Yverdun. We are not therefore to expect from Pestalozzi that conformity of his practice to his principles which is common with less eager and more self-contained natures. He is to be judged rather by his spirit and his purposes than by what he did.

The great purpose of Pestalozzi's efforts was "to reform educational methods in the interest of the poor and oppressed." To this he was prompted by an unwavering love of man and compassion for his often-wretched condition. This purpose and this love inspire all his works, and illuminate all his acts, so far as his acts could express his deepest convictions.

They appear even more clearly in his industrial school at Neuhof, his orphan school at Stanz, his home school at Burgdorf, his institution at Yverdun, and his eagerness when feeble with age to found a poor school at Yverdun, than in works like "Leonard and Gertrude," or "Christopher and Alice," or How Gertrude Teaches her Children."

To so reform methods of instruction that the elementary teaching might be done at home by the mothers, was a favorite idea of his during his entire life; and in order that persons wholly untrained, as most mothers are, might use his methods with success, he strove so to simplify and even to mechanize them, as to make their results depend rather on the nature of the processes than on the skill of the teachers. He did not even resent the charge of mechanizing method. On the contrary, once in the Burgdorf days, when an officer of the canton accused him of desiring to make instruction mechanical, Pestalozzi said "He hit the nail on the head, and supplied me with the very expression that indicated the object of my endeavors."

That this was no mere chance expression, but rather the statement of a settled purpose, is shown by the objection made by von Raumer to the procedure he had witnessed at Yverdun. He says "The compendiums were to render all peculiar talent and skill in teaching as good as unnecessary. These methodical compends were like machines which unfortunately could not quite perform their office without human aid, as for instance, however perfect the printing

press, it must always be tended by a man who really needs hardly the most common human reason for his duties. Pestalozzi's idea of a teacher was not much better than this: according to his views, such an one had nothing to do but to take his pupils through the compend with pedantic accuracy, according to the directions for its use, without adding thereto or diminishing therefrom."

This was certainly a low view of the teacher's functions, and is one to which the disciples of Pestalozzi at the present day would be unwilling to subscribe. It is especially strange that one who like Pestalozzi was engaged in a crusade against the dead mechanism of the schools of his time, should have seriously proposed to substitute for it another kind of mechanism,—the mechanism of an unvarying method. The erroneous course of thought by which he was led to make so serious a departure in his practice from the principles which he enforces so often and so well in his works, was probably something like the following:—He saw clearly that many of the worst evils of his time grew out of the neglect of popular education and the ignorance thence resulting: his ardent love for the people which was his most prominent and characteristic motive, impelled him to remedy these evils by striking at their source in popular ignorance: but he was firmly persuaded that the only effectual remedy lay in remitting the elementary instruction to mothers in the home: hence to carry out this impracticable plan with persons unskilled in teaching, he

attempted to devise methods whose results should depend not on skill but on processes. Could his effort have succeeded, and such methods have been introduced into every wretched home, it does not seem probable that the evils at which he aimed would have been remedied; for mere mechanical processes can never promote intelligence or moral thoughtfulness, without which the worst fruits of ignorance remain untouched.

A favorite idea of Pestalozzi's, which is strongly emphasized by some of his modern followers, was that all elementary instruction should be related to number, form and words,—number leading to arithmetic, form to drawing and writing, form and number to geometry, and words to the right use of language as the embodiment of ideas.

Von Raumer criticises these categories as referring too exclusively to sight, and hence seemingly excluding many sensible properties of objects which, though embodied in language, cannot properly be considered under either number or form; and thus, as he thinks, they run counter to Pestalozzi's most fundamental principle, that the basis of all instruction and especially of elementary instruction, should be laid on observation and the proper use of the senses. Doubtless this idea from its simplicity fascinated its author, and prompted a spirit so little circumspect as his to push its application too far; yet when we consider how absorbing a part sights and word-sounds play in the sense experiences of the young, and that the really

important phenomena which cannot readily be numbered or reduced to form, can at least be recognized by name as experiences of sense, it is obvious that Pestalozzi's idea may easily be so applied as to be helpful in elementary teaching.

His biographer, De Guimps, who was one of Pestalozzi's pupils, tells us that his most philosophic coadjutor, Niederer, made these three things the essence of his method, viz. *Aim*, *Starting-Point* and *Connection*. His aim was the development of the entire man through the *use* of his powers. The starting-point was to be in the child's tastes, and his ideas gained by previous experience. By connection was meant that exercises should be duly graduated to the powers of pupils, and so arranged that every exercise should grow out of the last and prepare for the next.

In conclusion let us enumerate what may fairly be considered the essential features of Pestalozzi's educational scheme. These are as follows:

(1) To develop the child and to form his mind through his own personal activity, rather than to attempt to furnish him with useful knowledge.

(2) To base all instruction on intuition, i. e., observation and experience, and to connect intimately with this the correct use of language, that the child may clearly express what he clearly conceives. Pestalozzi justly thought that his greatest service to education consisted in making the proper use of the senses effective as the basis of all good teaching, and in connecting this with the due use of language; and if any

one thing were to be named as the distinctive character of Pestalozzianism at the present day, it would doubtless be this.

(3) To furnish the pupil's mind with clear fundamental notions, or "mother ideas" as a preparation for all the more advanced work, as for example in geometry, geography, and most other studies.

(4) To popularize science by an objective presentation of its truths; in regard to which it may be said that in making science-teaching objective, more has been effected than merely to make it popular; it has become deeper and more fruitful; and in the form of laboratory study, its essential corollary, it is leading to a rapid extension of man's knowledge of nature.

(5) To conform the order of instruction to nature and common sense by beginning with that which is within the range of the pupil's experience, advancing from this gradually, keeping pace with his progressive development, and dwelling so long and so repeatedly on each step that he may be sure to master it thoroughly. In the application of this principle, Pestalozzi pushed so far the idea of beginning with the *near*, as to propose that object lessons should begin with the child's own body, evidently confounding the physically near with that which is nearest in the order of apprehension. He was wiser in recommending that religious education should set out from the child's love for the mother, and that this love should then be directed to God as the parent of all.

(6) To join practical skill with theoretic knowledge

by associating manual with mental labor, thus insuring the habitual coöperation of mind and heart with hand. It is only within recent years that educators have become alive to the importance and possible value of this idea in education. The idea is, however, by no means original with Pestalozzi, as we have repeatedly seen.

(7) To base the relation of teacher and child on *love*, and to pay due respect to the child's individuality. This principle, as has been seen, was the chief source of Pestalozzi's power as a practical teacher, atoning for many serious faults in both matter and manner, and achieving results which, as they are described, seem marvellous. Doubtless the race of teachers has still much to learn about the power of this principle, the most difficult of all to apply in the management of schools.

(8) To make all education culminate in character, and to make character the standard by which the value of all educational processes is to be measured.

(9) Above all to restore the home to what Pestalozzi conceived to be its proper place in education, and hence to make home instruction possible. This favorite idea of his has already been noticed, and its impracticability shown as a scheme for general elementary education. Yet he thought so highly of it, "that he wished to prove by actual experiment that those things in which domestic education possesses advantages, should be imitated in public education." His schools at Burgdorf and Yverdun were really an experiment

in this direction ; and that which distressed him most at Yverdun was, that with the increase of numbers and the complexity necessarily resulting therefrom, the home spirit that prevailed at Burgdorf grew less and finally disappeared.

Of all these principles, it is easy to see that little is absolutely new with Pestalozzi. Indeed it might be thought that most of his educational activity was merely an attempt to enforce and reduce to practice the best and wisest ideas of his predecessors. Such a supposition would, I think, be incorrect. In point of fact, fertile as he was in ideas and impulsive in action, he appears to have been wofully ignorant of what others had done or attempted in the same field of effort in which he was engaged. Hence not seldom, it is said, he toiled over discoveries that others had already made, or instituted experiments on what was already recognized as valueless or impracticable. Above all, he thus lacked the advantage which a spirit like his so much needed, of comparing his ideas and efforts with those of others.

He once said that he had not read a book in thirty years. It would doubtless have been better and easier for him if he had. No one man, however original, can be as wise as all men ; and he who permits himself to be shut out from the experience of his fellows, runs the risk of making many vain and many needless efforts.

Men, who like Pestalozzi, toil unselfishly for their fellows, toil that coming generations may be spared

some of the difficulties that they encountered ; and they have a right to expect that the records of their experience shall not be unheeded. To this end history is written, that men may glean wisdom from the experience of their predecessors ; and that Pestalozzi failed to do this, should be counted rather as a grave error than as a tribute to his originality.

It was doubtless fortunate for the fame of Pestalozzi, that the time of greatest eclat of his school at Yverdun coincided with the period of deepest humiliation of Germany under the conquering arms of Napoleon. In that hour of seemingly hopeless darkness, Fichte summoned the German people to a universal education of the coming generation to a new and nobler national consciousness, as the means of their future elevation, and pointed them to Pestalozzi for the principles on which such an education should be based. This advice was heeded ; and thus Pestalozzi became to Germany, and through Germany to the world, the representative of those principles which for two centuries a series of educational reformers from Ratich and Comenius down to Basedow, had with little effect proclaimed. The doctrines of the *Innovators* became henceforth the evangel of a new education ; and they were stamped indelibly with the name, not of Comenius, nor Rousseau but of Pestalozzi.

CHAPTER XIV.

GENERAL REVIEW OF EDUCATIONAL PROGRESS IN THE EIGHTEENTH CENTURY.

In concluding this consideration of the educational characteristics of the 18th century, it is essential briefly to review the course of school progress both higher and elementary in several leading European countries, and in America. In the course of this review, we shall have occasion to observe the growth in Germany of a movement for general elementary education, and of a conviction that such education to be effective cannot be left to local and spasmodic efforts, but must be made an affair of the State, which the State must plan, prescribe, supervise, and insure. We shall also see that before the close of the century the vernacular tongues have triumphed in the instruction of both higher and lower schools, in all the leading European states, and that thus the essential condition of universal education has been secured; and that Latin has been relegated to its proper place, as a subject of study by no means necessary, as once it had been, as the vehicle of all knowledge worth gaining, or as a medium of communication among men of culture, but yet vitally interesting if so pursued that we may become familiar with modes of life and thought with which, though now very remote in

point of time, we are still connected by close historic ties that cannot safely be severed.

The provisions for education in England and Scotland were much the same as were noted in the preceding century. English secondary instruction carried on in the famous public schools, underwent no marked change in either matter or manner; whilst elementary training, which was remitted wholly to private efforts or to private benevolence, was provided for by tutors or in private schools, and rarely reached the poorer classes until the last decade of the century.

From the conflicting accounts given by the partisans of reaction and of the Revolution in France, we may infer that during this century France was well supplied with classical schools and colleges, since it is affirmed that there were about 600 colleges, besides about sixty higher faculties in forty academic centres. In these higher schools, which were mostly frequented by the more opulent classes, though occasionally low-born boys of extraordinary promise, like Moliere and Rollin, were found in them, the studies were dominantly literary, and were directed quite as much to form as to substance. Yet the verbal repetition of lessons had been somewhat modified by the exposition of authors; and the French language, already famous in literature, had gained a foothold in instruction.

The teaching body was mostly clerical, though the Jesuits, with their immobility of spirit, had so declined in influence that in 1764 the order was expelled from France, its place being taken by Oratorians, and other

religious bodies. If this higher instruction be judged by the number of its schools, or by its most brilliant representative products, it would be ranked high; but if, on the other hand, we could know what were its average and general results, our estimates of its worth would possibly be considerably modified.

It is claimed by some persons that, although during this century no governmental care was given to general elementary education, still a large provision was made for the instruction of the humbler classes by various religious bodies, chiefly by the followers of La Salle. If we reflect that at the beginning of the Revolution the Christian Brothers numbered 1,000 teachers, enough at most for the instruction of 100,000 pupils, without deducting for the Brothers who were employed in secondary schools; and if we add to these for the poor children occasionally instructed by other clerical persons as many more,—we may readily apprehend how scanty a provision this would be for a school population which in 1790 could not have been less than about three millions.

When we farther learn that the schoolmaster, when not a priest, was also sexton, beadle, chorister, grave-digger, and bell-ringer; that he was to attend on marriages, baptisms, and burials; that his instructions were given not to classes but to individuals, class instruction being unknown save among the Christian Brothers; and that his first duty was to teach the children their prayers and to lead them daily to church, any residue of time being devoted to teaching

them to read, write and count,—we shall doubtless conclude that the humbler our estimate of the extent and depth of the elementary instruction given to the poor of France during the 18th century, the more likely it will be to correspond with the truth.

Such was the condition of education in Austria during the first seventy years of this century that Dr. Dittes says that in 1773 but little more than half of the children in Vienna received any instruction, that in Lower Austria sixteen per cent, in Bohemia six per cent, and in Silesia four per cent only, attended any school, while in other provinces of the empire the state of education was still worse. But in 1774 Maria Theresa, after her realm had somewhat recovered from the exhaustion of the wars in which she had been involved, entered vigorously on the work of organizing general education ; and during the short residue of her life she did a work for schools such as no crowned head had ever before dreamed of. At her death in 1780, there were already in Austria 6,200 "German schools," among which were fifteen Normal schools and eighty-three High schools.

For the prosecution of this work she called to her aid the justly famous John Ignacius von Felbiger. He had already approved himself a man fitted for the duties of minister of education in a period of active growth, by the remarkable work he had done in his Silesian diocese, in organizing and sustaining elementary schools for the wretched inhabitants. Though a Catholic abbot, he had drawn his pedagogic inspira-

tion from a Pietistic source. He had privately visited Hecker in Berlin, had examined and approved the Real school, and teachers' seminary, had at his own expense sent promising young men to learn Hecker's methods, and had largely adopted his Realistic ideas, while engrafting the training of teachers on schools which should serve as models to surrounding districts. With his energetic aid the empress accomplished the great work that has been mentioned, organizing a system which included, besides elementary and higher schools, also schools for girls and several Normal Model schools.

To Maria Theresa is due also the credit of recognizing and rewarding the merit of Ferdinand Kindermann, who in her Bohemian dominions had been active in organizing elementary schools for the poor, and who, to interest the people in them, added to the usual elementary subjects, instruction in various local industries, thus earning the title of "Creator of Industrial schools."

Although after the death of the empress, Felbiger was permitted to retire to an ecclesiastical position where he died in 1788, her immediate successors carried forward the educational work that she had begun, until near the close of the century, when a clerical reaction began under which the schools of Austria suffered greatly.

No other country shows so marked educational advancement during the 18th century as Germany; and this is especially true of secondary education.

The movement of the Pietist Francke, with the wide-reaching and well-omened impulse that it gave to the training of teachers, to the founding of Real schools, and to the pursuit in larger measure of studies other than those of a purely literary character, was not only German in its origin, but during this century, expended its force chiefly on the schools of Germany. Likewise Basedow's Philanthropinum, though it was attended with misfortune, doubtless did much good, both by attracting attention to practical studies and to novel ideas, and by promoting a more rational dress and regimen in the secondary schools, which were widely corrupted by senseless French fashions.

To these changes, which were mostly in a realistic direction, was added during the century, in both gymnasien and universities, the very marked improvement in Humanistic studies, to which attention was directed in a previous chapter. Through the efforts of men like Gesner, Ernesti, Heyne, and F. A. Wolf, there arose in all the higher institutions a thoroughly enlightened Humanism, which, no longer contenting itself with the study of correct form and of grammatical minutiae addressed to adhesive memory, strove by philological methods to assure a realization of the ideas, and modes of thinking and living presented by classical authors, and a hearty appreciation of their beauties.

Thus Gesner, in recommending a style of classical study in which pupils with their whole soul and undivided attention fix their eyes on the author that

they read, striving only to understand him and to enjoy his beauties, tells us that “when he read Terence with his boys in this manner, they sat with parted lips, hushed in breathless silence, their eyes, their ears, their thoughts intent,—smiling too, since their emotions were mirrored in their looks;” but when, with the same boys, he read Euripides in the usual dragging piece-meal fashion, “they sat indeed with open mouths because they yawned, and silent because they dozed.”*

Through such a change in the spirit of Humanistic study as is here illustrated, as well as through the preparation of young men to teach in this spirit, which Gesner, Heyne, and Wolf cared for in their philologic seminaries, secondary instruction in Germany was very materially improved in this respect, and assumed its present form.

Finally the movement to make German the medium of higher instruction became dominant in this century, through its growing use in university lectures, in which Thomasius seems to have led the way, first in Leipsic and later in Halle: this was naturally followed by its use in the gymnasium, so that the despairing cry arose in many quarters that the world was surely relapsing into barbarism, since even from university chairs one might no longer hear any other language than German. Doubtless the growth during this age of a noble and truly national literature had much influence, here as elsewhere, in hastening the dis-

* Von Raumer, *Gesch. der Pädagogik*, Vol. II. p. 147.

use of Latin as a spoken tongue, and thus indirectly prepared the way for universal education by the use of the vernacular.

The improvement in the popular elementary schools during this century was not, however, commensurate with that in the higher institutions. During the last part of the 17th century and in the 18th, most if not all of the German states recognized elementary education for all children as a matter of state policy, and urgently pressed on the parishes the duty of providing it for all,—so urgently indeed in some cases that some have looked upon the decrees as the beginning of school compulsion; but the duty, being left to local efforts, was largely neglected or else very carelessly performed.

The peasant considered the schools a needless burden, and offered a stupid resistance to them; the nobility dreaded the effects of any enlightenment on the lower classes, and hence were unfriendly to schools; and the clergy to whom the oversight of schools was entrusted, were too often indifferent to their interests, or even obstructed their progress. Hence little really effective work was done. In many regions there were no schools; in more there were very poor ones. School houses were often mere huts; school appliances were very defective or wanting; and the country teachers, whom the Teachers' Seminaries had not yet reached, were still recruited from the failures in other vocations, and were an inefficient class “whose income was mean and whose social consequence was small.”

This account, which is given by Dr. Dittes, bears a striking resemblance to the descriptions given by credible witnesses of the schools in the United States during the first decades of the present century.

Prussia made the most noteworthy efforts of any of the German states for the advancement of general education. The father of Frederick the Great, penurious though he was and fond of tall soldiers, established a small school fund, founded about 1735 the first Prussian school for training teachers, with one of Francke's adherents at its head, and made efforts to enforce attendance in schools, but evidently with small success.* It is said that during his reign about 1,700 elementary schools were established in his dominions.

It has already been stated that Frederick the Great early adopted Hecker's school for teachers as a state institution; besides which he long made energetic efforts for the improvement of popular education, by establishing considerable school funds, and by vigorous directions to those charged with the duty of supervising the schools. The small results of his efforts, due to the lukewarmness or the opposition of the parishes, the clergy, and the church boards, so discouraged him, however, that in 1779 he determined that "Old soldiers who could read, write, and cipher, and were in other respects well fitted for schoolmasters in the country should be employed."

When, however, the efforts of governments had accomplished so little in lifting the load of popular

* Schmidt, *Gesch. der Pädagogik* Vol. III., p. 513.

ignorance and unreasoning opposition, a school reformer arose in the ranks of the nobility, who, by his benevolent work upon his own estates, by the schools that he founded, by the elementary school and method books that he prepared, and by the influence that went forth from his generous exertions, justly won for himself the title of "Father of the Prussian Country Schools." This man was Friedrich Eberhard von Rochow, whose life extended from 1734 to 1805.

The early years of his manhood were passed in the military service ; but the last forty-five years of his life he devoted to the improvement of his large estates. He gives a vivid and pathetic account of the manner in which the misery of the peasantry, growing out of their gross ignorance and consequent stupid obstinacy, was forced upon him in a period of pestilence, and of the resolution that then sprang up in his soul to remedy this evil by a general education practically suited to their condition and their needs. It is sufficient for our purpose to say that, at his own expense, he established schools on his estates, trained teachers for their work, devised methods for their use suited to the intelligence of children sunk in hereditary ignorance, and even prepared school-books, which exerted a wide influence from the manner in which they appealed to the observing powers and brought into use rudimentary faculties of judgment and reasoning.

By the example that he gave, of the manner in which the problem of general education for a large ignorant

population could be successfully attacked, and of the kind of training needed by teachers for this special work, von Rochow closed the 18th century with the promise of a brighter day for the German elementary school, a promise which the 19th century has made a reality.

In our own country the 18th century was marked, as is well known, by Indian raids, by French and Indian wars, and finally by the long struggle of the Revolution and of the subsequent reconstruction. Under such circumstances, it could hardly be expected that education would make any great advance. Aside from New England and to a very small extent in New York, education depended on private and benevolent efforts; and everywhere, with but few honorable exceptions, the elementary teachers, even where not stained with vices, were men of but meagre knowledge and exceedingly narrow views, who opened schools for lack of other employment or as a stepping-stone to something more agreeable, and the meagreness of whose salaries was commensurate with their qualifications.

In New England the legal requirements for general elementary education were continued, but the subjects attempted were few and the means used were humble. The staple were the so-called Three R's, reading, writing, and reckoning; but the sole reading-books were the Bible, the Psalter, and the limited exercises in the New England Primer and spelling books like Dilworth's. Near the close of the century, these were

supplemented by Webster's reader and long-used spelling book, and by Caleb Bingham's American Preceptor and Columbian Orator. At about the same time Pike's and Daboll's Arithmetics superseded Hodder's which had been long in use.

Geography and English Grammar were rarely touched. Morse's Geography and Bingham's Young Lady's Accidence, both, I think, the first American books on these subjects, were published in the last two decades of the century. The 1809 edition of Morse which is before me, contains but two maps, those of the world and of N. America; and the preface to the first edition, 1789, shows that it was intended "as a reading book, that our youth of both sexes, at the same time that they are learning to read, might imbibe an acquaintance with their country and an attachment to its interests."

Yet meagre as were the studies and appliances, and poor as were the teachers, the vigorous youth of those earlier days seem often to have made effective use of what they had. Reading matter was far from plenty, in the homes as in the schools, but the little that was at hand was perused to mastery, undiluted by a flood of trashy fiction; the specimens of penmanship which exist in the copy books and ciphering books still preserved by old families, show that beautiful writing was not uncommon; and the soundness of judgment and skill in affairs displayed by many men whose educational advantages had been limited to what was taught in the New England common schools,

testify to the thorough use that was made of what these schools had to offer.

In New York during this century, I know of but three legislative provisions for education. The first of these, in 1702, at the instance of Governor Cornbury, established a free grammar school for seven years in New York city, and gave it a grant of £50 a year. The second, by an act passed in 1732, gave legislative aid for seven years to a public school in New York, in which should be taught Latin, Greek and mathematics, and which is claimed to have been the germ from which sprung King's college, now Columbia. The third, by an act passed in 1795 on the recommendation of Governor Clinton, appropriated \$100,000 a year for five years for the encouragement of schools.* South of New York, whatever elementary instruction was given was wholly a matter of private undertaking on the part of parents, societies, or would-be school-masters, save perhaps to a slight extent in New Jersey.

More remarkable than the efforts for elementary education in those troubled times, were the provisions that were made for higher education; for not less than twenty-two colleges had their origin in the 18th century. Among these were such famous institutions as Yale, which began in 1701 as a collegiate school at Saybrook, and was without settled home until 1716 when it was fixed in New Haven; the college of New Jersey, founded at Princeton in 1746, but which had

*This act appropriated £20,000, which by some is made \$50,000, and by others \$100,000.

its germs twenty years earlier in the "Log College" of Rev. William Tennent; the University of Pennsylvania which began in 1749 as an academy, and grew in less than a decade into a college; and Columbia, which was founded in 1754 by funds donated by private individuals, by £3282 received from a lottery, and by £400 given by the king from whom it received its early name of King's College.

Brown and Bowdoin, Dartmouth and Williams, Rutgers and Union, date from this century, besides other colleges somewhat less frequently mentioned. Nor should we neglect to mention the establishment in 1784 of the University of the State of New York as a central organization for the purpose of incorporating and having the oversight of academies and colleges, of reporting yearly on the condition of the institutions under its charge and of conferring degrees higher than A. M.

On the whole it may fairly be said that, when we consider the circumstances of this new and sorely troubled country, the degree of educational zeal that was displayed in it during the 18th century was not surpassed by that of any of the older European civilizations.

NOTE.—Although I am aware that, from the 15th century, the schools and universities of the Netherlands compared favorably with those of any of the surrounding countries; that the interest in education of the early Dutch settlers of New York, so emphatically shown in many of the documents of the Documentary History of New York, is an inheritance of the spirit that prevailed in the mother country of the emigrants; and that during the 18th century, schools, as well as flourishing universities, existed; yet it has not seemed expedient to include any account of them in this brief review.

CHAPTER XV.

EDUCATIONAL CHARACTERISTICS OF THE NINETEENTH CENTURY.

It is probable that every age is prone to magnify its own achievements, and to vaunt them above all that has hitherto been done. It is certain that this self-magnifying spirit characterizes the 19th century, if we may judge of it by the outgivings of those who seem to be the accepted mouth-pieces of public opinion. So far, however, as one may be supposed to judge dispassionately of his own times and what they have accomplished, this century is likely to be distinguished in future ages, not more for its inventions, its discoveries in science, and its industrial progress, than for the unprecedented educational activity which it has displayed,—an activity which has extended to all classes of society, and which has produced its most remarkable results in the very lowest classes.

It would obviously be premature at the present time to attempt in any detail to weigh the significance of the educational events which this century has witnessed, or to pass any definite judgment upon them. The facts are too near at hand, they are too numerous and complex in character, their actual results are still too little apparent, to admit of that truth of depiction and justness of perspective which should belong

to an attempt at a historic picture ; even were the warmth of personal feeling which present events are calculated to excite, not sure to give an undue coloring to many parts.

Time is the only sure test of the relative importance of historic events. It often buries in comparative obscurity many occurrences which to the actors seemed to be of first rate importance, and leaves in bold prominence that which to contemporary observers seemed of inferior moment. Thus it is doubtful whether, to the men of the 18th century, the struggle of vernacular tongues for recognition in instruction seemed fraught with the wide-reaching significance which we can now see that it really had. To the contemporaries of Francke, the fiery religious zeal which pervaded his institutions was doubtless a far more interesting phenomenon than either his efforts for the better training of teachers for his schools, or the realistic cast of studies and purposes of instruction that prevailed in them ; yet the first was comparatively transient, whilst the importance of the other two is becoming daily more apparent.

These considerations need not, however, deter us from examining in their broader aspects the most striking educational facts of our own century, though they will in most cases render impossible any very reliable estimate of their permanent importance. I will therefore state what seem to me to be the most noteworthy of these facts in the order in which we shall examine them more fully.

The first fact that will be likely to arrest the attention of even the casual observer, is the enormous pedagogical activity by which the 19th century has been characterized, an activity which has been displayed, partly in literary or quasi-literary efforts, partly in educational experiments some of which have become accepted educational usages, and partly also in wide-spread educational associations.

A second fact has been the rapid spread of schools of every kind, but most especially of schools for universal elementary education, with the growth of which has been correlated a tendency to give the elements of learning to all children free from individual expense, and to insure to every child at least a minimum of training by making school attendance compulsory.

A third very interesting fact is the great extension of the means for the professional training of teachers which has taken place during the century, without which the increase in the number of popular schools would have been likely to disappoint the public expectations by the meagreness of their results.

A fourth noteworthy fact is the careful provision that has been made in many of the European states for thoroughly supervising the work of the schools,—a provision whose benefits are being rapidly extended to many parts of the United States, since it is seen that its importance for the efficiency of the schools is second only to that of the training of teachers for their work.

The zeal of the advocates of manual and technical training has forced on the attention of every one what we may fairly consider a fifth characteristic of the educational history of the century; though we shall have occasion to observe that the idea of associating the training of the hand with the intellectual and moral education of youth, is far less modern than many of its advocates seem to suppose.

The very considerable improvements that during this century have taken place in schools and methods of instruction, on the general lines of the Innovators, but in which Pestalozzianism has been the chief rallying cry, will claim attention as a sixth educational fact, and one of the most interesting of all, since it is that through which all other facts of the same order gain their significance.

A seventh fact of no small interest is the vigorous discussion which this century has witnessed of the relative value of various studies as means of culture, in the course of which the claims of the classics, of the mathematics, and of the sciences of nature, have been examined diligently and with some heat; and its interest is enhanced when we consider that since the days of Plato and Aristotle the culture value of studies has been comparatively little emphasized, whilst a comparison of culture values has hardly been thought of. This fact is of special interest, as an awakening of the dormant Humanitarian ideal, which seems destined more and more consciously to influence the education of the future.

Section I.—Pedagogical Activity.

Any attempt at an examination of the vast product of literary activity in the domain of pedagogy during the 19th century would be manifestly impossible, until time has winnowed from it all that is ephemeral, and left prominent only the enduring. German treatises, which are the most numerous of any, would alone fill a very considerable library; and many among them, like the works of Herbart and Beneke, Waitz and Dittes, Schrader and Nohl, which would be most desirable additions to an educator's library, are inaccessible to most English speaking teachers, from lack of translation. Froebel's Education of Man, and Preyer's interesting study of childhood, have found translators; Barnard's American Journal of Education, that wonderfully rich pedagogic collection, has given in English dress, but in detached portions, a large part of von Raumer's History of Pedagogy, and also much of Pestalozzi's writings. Rosenkranz's Philosophy of Education has met with favor in the annotated translation of it which has appeared; but when one reflects on the rich stores of pedagogic thought and experience that are hidden from the inquiring teachers of our own country in an unfamiliar tongue, and on the thoroughness of treatment which characterizes many of these treatises, one can but hope that several carefully selected works of German pedagogues may soon be made accessible to English-speaking teachers. Possibly none would be more widely acceptable than the second and third

parts of Dittes' *Schule der Pädagogik*, followed by Waitz's *Allgemeine Pädagogik*, and Paulsen's *Geschichte des Gelehrten Unterrichts*.

While Germany has been most prolific in pedagogic literature, other European countries have shown a creditable zeal in this line. A few excellent French works have already been rendered into English; some others ought soon to find translators, especially the brilliant and valuable work by Prof. Compayré entitled "*Histoire Critique des Doctrines de l'Education en France, &c.*" The remarkable work of Rosmini on "*Method in Education*," though but a portion of a large projected treatise, proves that Italy has felt the impulse of the pedagogic spirit of the 19th century.

I am inclined to think that Great Britain deserves to rank next to Germany in the influence exerted by its contributions to the literature of education, a number of which are quite as well known in America as in England. Such are the works of Mr. Gill and Prof. Laurie; the excellent lectures of Mr. Fitch on teaching; the interesting sketches of educational reformers by the lamented Mr. Quick; the lectures of Mr. Joseph Payne, so well adapted to inspire teachers to seek right principles of instruction and to use them in right ways; and Dr. Bain's "*Education as a Science*," a somewhat detailed treatment of general pedagogy, in which every point that is discussed is sharply referred to its scientific basis in those sciences in which the author is himself so eminent an authority, and whose treatment of controverted points

is so forcible that, where we are inclined to disagree with the author, we feel ourselves compelled to fall back on something more substantial than mere pre-conceived ideas.

But of all that has been written in English, during the present century, probably no pedagogic treatise has attracted more wide-spread attention, or has exerted more influence than Herbert Spencer's "Education," It is characterized by that clearness of exposition and felicity of illustration of which Mr. Spencer is so great a master and which never leaves one in doubt as to his opinions. Of all the pedagogic works of the century that have appeared in English, I am inclined to think that a brief examination of this will give us the fairest sample of the nature and direction of pedagogic thought.

This treatise, which appeared originally as four Review articles considering education from as many different points of view, in its collected form, consists of four chapters treating respectively, of the best *means* of Education, of Intellectual, of Moral, and of Physical education.

In the first chapter he propounds the question "What knowledge is of most worth?" and gives to it an answer which, though widely and vigorously controverted, seems to be gaining yearly more adherents, at least for the present. Philosopher as he is, he sees that for any definite answer to a question of such vital moment, some standard of relative value must be fixed which is likely to meet with general acceptance;

and he proposes in substance this proposition as such a standard, viz.: that the relative value in education of various groups of studies should be tested by inquiring how effectively they *promote complete living*.

To this proposition, he adds a statement of those forms of activity which, in his view, constitute a complete human life, arranging them as follows in the order of their relative importance: (1) the activities of self-preservation, (2) those that are needful to secure the necessities of life, (3) those that pertain to the rearing and training of offspring, (4) those that promote proper social and political relations, and (5) those that look to the culture and gratification of the æsthetic feelings and taste.

He ingeniously reasons "that these divisions subordinate one another in the foregoing order, because the corresponding divisions of life make one another possible in that order." Thus man must first know how to preserve his physical existence, and to minister by his activities to his daily recurring needs, before he is fit to have and to rear children; the proper rearing and training of children takes precedence of social and political duties, because "the goodness of a society ultimately depends on the nature of its citizens," and this nature "is more modifiable by early training than by anything else;" and finally all these are more vitally necessary than the various sources of elegant pleasure, such as are afforded by music, poetry, eloquence, and the fine arts, because "society supplies the conditions of their growth, and also the ideas and sentiments they express."

Without pausing just at present to question the sufficiency of his statement of those activities which constitute complete living, let us see to what choice of means his postulates lead him, with the addition of this farther postulate, that "acquirement of every kind has two values,—value as knowledge, and value as discipline,"—or as the Germans phrase it,—a *material* and a *formal* value. Without entering at all into the process of illustrative exposition which he adopts, and in which he is so remarkably expert, it is sufficient to say that, examining separately each of the activities that he recognizes as to the kind of knowledge and training that it demands for its successful conduct, he finds in every case that *science* is the most efficient means. It is to be observed, however, that in the extension which he gives to the term science, it includes not only the sciences of nature, but also sociology and psychology, mathematics and history, excluding only the science which embodies all others, the science of language.

Finally, after establishing to his own satisfaction the preeminence of science as a means of preparation for the various activities of human life, he proceeds farther to show that, better than language, it trains memory, judgment, and reasoning; and that moreover it affords a most efficient training in morals and religion. It is easy, however, to see that in considering science as a means for developing the moral and religious side of man's nature, Spencer has tacitly narrowed his view of science and limited it to the sciences of nature.

On a closer examination of this famous chapter, philosophical though its analysis appears, strongly as its conclusions seem to be enforced, and convincing as its argument is likely to impress one as being on a cursory reading,—it is sure to rouse in the critical reader a feeling that something essential is lacking, that there is some latent source of error in the discussion.

A critical examination shows that the source of error is twofold, being first, an imperfect view of what constitutes complete living; and second, a temporary massing together under the vague name science, of subjects generically unlike in character, omitting only from this heterogeneous mass, a group of subjects whose use especially characterizes man, and is both the symbol and the instrument of his superiority among living beings: for man is not merely an observing, thinking, morally judging, and religiously aspiring animal; but he is all these, and that too in a constantly increasing degree, because he is also a talking animal, who uses language as the embodiment of his various experiences and is thus enabled to grow more intelligent by his experiences.

Considering now what is included under the term *science*, we find that Spencer comprehends under it, not only those sciences whose subject-matter is of the most concrete possible character, and whose method demands the use of the observing powers followed by reasoning more or less completely inductive; but also mathematics whose subject-matter and method differ

toto orbe from the former, since it uses rigid deduction upon concepts of the most abstract nature, demanding no observation; and even adds to these history, whose gathering, verification, and analogic use of testimony, in the formation of opinions about past events, obviously involves a widely different use of the human powers from either of the other two, and both trains and informs to quite different purpose.

It may readily be seen that a dextrous reasoner, using a premise compounded of so heterogeneous elements, could easily prove almost anything he wished; by using it in its entire vague extent when it suited his purpose, as Spencer has done in treating of human activities and their requirements; or by limiting attention to some convenient portion at other times, as he does when considering the disciplinary results of science. The fallacy is therefore the use of a vague, heterogeneous, and *variable* middle term. It is used indeed to strongly emphasize the worth of certain valuable and much neglected studies and thus has done good service; but, in doing this, it has presented a partial truth as though it were the whole truth, and thus leads to error.

Most unprejudiced educators doubtless believe with Spencer that science, strictly so-called, and mathematics, and history, are each and all valuable, both as discipline and as means for the better conduct of life; but they do not necessarily think that he has given a sufficient answer to the question with which he set out, viz.: what knowledge is of most worth. The

whole truth is that all three of these groups of subjects, and language also, are not only very useful, but even indispensable means of a complete culture,—a culture that shall fit a man to act well his part in all the real activities that make complete living, and shall so equip him with both mental furniture and trained powers, that he shall not find himself helpless in the presence of any problem that life may present.

This brings us to the examination of the scheme of activities which Spencer deems to constitute complete living. And here we at once observe that, although he names the moral and religious sentiments amongst the capabilities that are trained by science, he has curiously enough omitted any mention of them in his detail of the experiences of a complete life. He has described man as a being who cherishes life, rears offspring, does duty in society, and enjoys æsthetic pleasures; but he leaves out what constitutes his worth in all those activities which bring him into relations with others, that is, all that makes up *character*.

Prof. Compayré, in the closing chapter of his history of educational thought in France, has noted and supplied this omission; and he has done it so well, that I gladly seize this opportunity to give the reader a glimpse of one of the foremost French writers of this century on pedagogic questions, in his statement of the bearing of this omitted activity on the question of the value of studies as means.

Compayré is ready to accept as valid Spencer's

standard of value ; but in arranging his scale of activities, he connects Spencer's second with the first where it logically belongs, and intercalates in its place as second in urgency only to self-preservation, the moral and the religious tendencies, conscience, moral thoughtfulness, and a will rightly directed,—in short all that goes to the formation of character. Man must learn to live first, he is ready to concede, but next to that he must learn to live rightly, before he is fit to become either parent or citizen, or to enjoy innocent pleasures to the full. And few will venture to deny that Compayré is right. Rollin did but express the general opinion of the ages, heathen as well as Christian, when he said—"It is the good qualities of the heart which give value to all other qualities, and which, while making the true merit of the man, render him also a fit instrument for promoting the well-being of society."

The modifications of Spencer's list of means which Compayré deduces from this interpolated activity, are important. "Since the soul is not created in its finished form," he says, "it should be shaped by the lessons of history, by the models of literature and art, and by religious instruction." He thus demands the addition to Spencer's scheme, of definite instruction in language, and of a *positive training* in morals and religion, in place of one that is purely incidental, and that leads too often to a mere agnostic altruism which knows no God, and recognizes no higher sanction for morality than a supposed tendency to increase earthly

happiness. He thus completes the cycle of educational means, science, language, history, mathematics, and religion,—all needful to fit a man for complete living, each contributing its due share to the task, whatever the degree of completeness to which it may be carried, and no one of them entitled to claim pre-eminence over its fellows.

The most enlightened educators tend everywhere to act upon this view in the selection and arrangement of educational means, though not always selecting the ancient classics, which Compayré would prefer, for language training ; whereas Spencer's scheme, which was intended to correct the obvious one-sidedness of an education too exclusively devoted to dead languages, would lead to a new and even more injurious one-sidedness.

In the second chapter of this treatise, which deals with intellectual education, Spencer uses his powers of exposition and illustration to enforce educational principles which had been formulated by the Innovators, but had now taken the name of Pestalozzi. These had hitherto made but little way in England and America ; and I am inclined to think that we owe the fact that they have now become familiar to English speaking people, largely to this work of Spencer,—that he first *effectively* introduced them to our teachers, in whose improving practice they are gradually making themselves felt. In this work, also the earnest and animated lectures of Mr. Joseph Payne, which have been widely read, have done effective service.

The chapter on moral education, or the training of the young to estimable character, is highly suggestive. Conceiving rightly the importance of this duty, and likewise its universality, since the vast majority of persons are destined to be parents, if not teachers, he declares that "The subject which involves all other subjects, and therefore the subject in which the education of every one should culminate is the theory and practice of education." He states clearly the difficulties which obstruct the better moral development of the young, difficulties which arise in part from the defects of those who have their education in charge, in part from the imperfections of the society for which they are to be trained. Hence he expects that general moral amelioration will be but gradual, and that it will be correlated with a gradual elevation of both individuals and societies to higher planes of living and thinking.

Spencer anticipates much from the general application in moral training of the idea of *natural punishments*, or rather natural reactions, that is to say, reactions which are obviously the direct, natural, and invariable results of conduct good or bad, and which teach children by experience to choose the good and avoid the bad. To the exposition of this idea, and to copious illustrations of its application in many of the cases which most frequently arise in youthful training, he devotes the entire chapter. From this, which he considers the Normal System of discipline and claims to be parallel both with that by which

inanimate nature teaches us to obey her laws, and with that which the adult man encounters in active life, he expects several very important advantages over the usual course of youthful discipline. Whether or not this fundamental idea on which Spencer bases his plan for moral development, would accomplish all that is desirable in the moral training of the young, and would admit of convenient application in all cases of discipline that might arise, there can be little doubt that it would be a great improvement on the present arbitrary modes of procedure in which rewards and penalties have little obvious relation to conduct.

The last chapter, in which physical education is discussed, is especially valuable, since it sets forth clearly the physiological relations to innervation and mental activity of the function of nutrition, and of the due conservation and utilization of its results in the processes of growth and strength by proper exercise and clothing; and because it illustrates the principle of the inverse ratio of rapid growth to structural perfection as holding good as well in the brain as elsewhere, so that the hastening of brain *structure* by urgent early education is attended by arrest of its *growth* and by eventual diminution of its power. These important truths which are too apt to be overlooked by those who have charge of the young, he illustrates and enforces in treating of diet, clothing, exercise, and mental exertion.

Noteworthy in this chapter are his refutation of the *hardening-process* notion, his preference of free and

vigorous play to formal gymnastics because of the tonic effects of youthful happiness, and his advice that mental exertion should in all cases be restricted in a degree proportioned to the rapidity of growth, and should be increased only so fast as the normal rate of growth diminishes.

Despite the narrowing tendency of some of its doctrines, this work of Spencer justly holds a high place in the pedagogic literature of the 19th century.

The United States have likewise made no inconsiderable contributions to the pedagogic literature of the century. They have produced works like the lectures and reports of Horace Mann, and the treatises of Page and Northend, of Hosmer and Mansfield, and not a few others, all of which have been useful in their time; but probably the works most widely known are the accounts of foreign school systems by Alexander Bache and Dr. Henry Barnard, and the vast encyclopædic collection of valuable pedagogic matter brought together by the last named author in his *American Journal of Education*.

When we view this pedagogic activity of the 19th century in its quasi-literary aspect,—in the multitude of educational essays, proceedings of associations, and periodicals; of educational reports by cities, States and countries; of analytic discussions of educational exhibits; of publications like the *Circulars of Information* of the United States; and last but not least, in the swarms of text-books which hover over every department of human knowledge, and which might

not inappropriately give to this century the title of "The Age of Text-Books,"—we shall doubtless need no other proof that educational interests, so far as indicated in printed works, have received an amount of attention unparalleled in the world's history.

The practical expression of this pedagogic activity may be seen in the systematic school organizations of most European countries and American cities, and the highly encouraging outline schemes of organization of many American States and provinces, all of which are practically, as systems, the work of the present century, and indeed, in not a few instances, owe their efficiency mostly to what has been done in the last sixty years.

Still another outgrowth of this activity is presented by the numerous and effective associations of teachers, to promote the interests of their calling by papers and discussions, in which the results of individual experience are made the common property of many, while stimulating all to more earnest efforts by the consciousness that they are not isolated units, but members of a great army of workers animated by a common purpose. Thus, in the United States, we have our National Association, organized in 1857, and bringing the prominent teachers of our vast domain into healthful relations with one another: most if not all of the States have their associations; and in not a few cases, the associative principle is extended to smaller sections than States, and to educators in special departments. Yet the United States are by no means in advance of

many other countries in associated efforts for the advancement of education.

Such then are the manifestations of the extraordinary pedagogic activity of the 19th century, which are presented by its literary and semi-literary productivity, by its organizations, and by its associated efforts. They are certainly very noteworthy.

Section II.

Let us now see what has been the result of all this activity in the general diffusion of *popular education*, which, not content with the improvement of the better classes and of the élite youth, reaches down helping hands to elevate the poorest, the humblest, and the most neglected classes of society. We have already seen what was the condition of general education in the 18th century, that little effort had been made in that direction save in Germany, Scotland, and a small part of the United States; that the results of this effort had been neither wide nor deep; and that the state of things at the close of that century was not very encouraging, the efforts of von Rochow in Prussia, of Scotland and New England, and the notable temporary aid given by the New York legislature, being the brightest points in the situation.

This consideration will enable us more clearly to appreciate the enormous advance that has been made in public elementary education during the present century, in many states of Europe and America, not to mention India and Japan. In all parts of the civilized world very considerable efforts have been

made to extend the benefits of education to all classes, and in many countries, the ratio of illiteracy has become relatively small and is decreasing. This is especially true in Germany, Switzerland, Holland, Denmark, France, and Great Britain, and in the northern United States and Canada. Indeed it might be said without any material inaccuracy that general elementary education is the creation of the 19th century.

The movement has however not been free from vicissitudes. Germany is apt to be referred to as the typical home of progressive popular education; yet, in the opinion of well-informed Germans, its progress there during this century has met with a serious retrogression. In the period between 1840 and 1872, a reactionary movement occurred in Prussia and some other Germanic states, which was so serious in its effects that in 1870, of the recruits for the army from three provinces of Prussia about 14 per cent were wholly illiterate, whilst of the recruits from Saxony and Würtemberg less than five in a thousand were unable to read and write. The effects of the reforms made in 1872 have been so marked that illiteracy amongst the recruits of 1888 has been reduced in the worst cases to less than a fourth of that in 1870.

The Census Reports of the United States for 1880, show that of persons ten years old and upwards 13.4 per cent were unable to read. Though this may not seem a very encouraging exhibit, we find occasion to modify any unfavorable opinion of the efficiency of

popular education in the United States, when looking farther in the census tables we find how large a proportion of the illiterates is made up of the freedmen of the south and of ignorant foreigners. When the foreign element is eliminated from the calculation, Massachusetts is found to have but seven per thousand and New York twenty-two per thousand who are unable to write. The energy with which educational extension has been pushed during the past decade in sections where ignorance most abounds, gives reason to expect that the census of 1890 will show great progress over 1880.

The State of New York affords a good example of the growth of our public school system, and of the fact that it owes its efficiency wholly to the 19th century. In this State great difficulties were early encountered in all attempts at common education, from the heterogeneity of its population, composed as it was of immigrants of several nationalities and speaking different languages or dialects. Hence until near the close of the 18th century, education was mostly private. An act passed in 1795 appropriating \$100,000 a year for five years for the encouragement of schools, proved inoperative during its last two years, expired by its own limitation, and was not renewed.

In 1805, however, provisions were made for the formation of a fund whose income should aid in the support of schools, and this fund in 1890 had increased to \$4,023,140. Also in 1836 the State received as its

share of the surplus in the United States treasury, which was deposited until called for with the several States on the basis of their representation in congress, the sum of \$4,014,520, and devoted it wholly to the promotion of education. This constitutes what is called the United States Deposit Fund, the income of which is yearly apportioned to common and secondary schools, to instruction of teachers' classes, and to the increase of the general school fund.

It was not until 1812 that an act was passed taking the elementary schools under the oversight of the State, and looking to their permanent establishment. Hence the school system of New York is now (1891) but seventy-nine years old. From 1841 to 1856 experiments were tried first with county supervision and then with supervision by towns, ending in 1856 with the present system of supervision by Assembly Districts.

Up to 1867, the school moneys received from the State were supplemented in the several school districts by *rate bills*, in which the deficiencies were apportioned among the patrons of the schools in proportion to the number of days of attendance of their children. Since 1867, the public schools have been supported wholly by funds received from the State and from local taxation, and instruction in them is *free* to all children residing in the respective districts.

The time during which schools are required to be in session was in 1889 raised from 28 weeks, as it had stood for a considerable period, to 32 weeks, a higher

minimum than is demanded in any other State, though at least three other States show a higher average number of days during which schools were in session. During the year 1890, 1,042,160 children were in attendance on these schools, more than 17 per cent of the entire population ; and the entire expense of the system was \$17,292,471 $\frac{61}{100}$, or \$2.90 for each individual of the population. In 1886, Prussia expended per unit of population nearly \$1.02 for her popular schools.

It is often alleged that the growth in efficiency of the public schools in the United States has by no means kept due pace with the increase in attendance and expenditures ; and this allegation is probably not without too much foundation. Its chief cause is sufficiently apparent in the lack of any settled and permanent teaching body ; and this cause of the lack of any sufficient result from the sums that are expended, can be removed only by the growth of a public sentiment, which shall regard the teacher's vocation as a permanent and honored profession, to be carefully prepared for and competently compensated, and which shall besides be ready to place the teacher's tenure of his place on a basis more reliable than local, or sometimes even personal, fluctuations of opinion.

But aside from faults like this, which are the perhaps unavoidable attendants of the rapid growth from chaos towards a system,—when we consider that what has been done to provide instruction for all classes is the work of a century which is but just entering on

its last decade, and that the illustration that has been given has been chosen, not because it is probably the most favorable (England would be quite as favorable), but because the materials chance to be the most accessible,—we shall doubtless see occasion to wonder rather that so much has been done than that it has not been more perfectly done.

Correlated with this vast extension of facilities for popular instruction, has been the growth of a tendency to make it both *free* and *compulsory*. In Germany elementary instruction, usually between the ages of six and fourteen, is everywhere compulsory, though a small fee is paid by those who can afford it, in some of the States at least. In England also elementary education has been made obligatory, a small weekly fee being required, in certain cases, of those who are able to pay. In France elementary education has recently been made both free and compulsory; and in some of the smaller European states, like Switzerland and Denmark, compulsory attendance at school within certain limits of age is the rule.

It is also asserted that where obligatory school attendance has been some time enforced, it soon ceases to be attended with any considerable trouble or friction. Certainly one of the things that strongly impresses an American visitor to many European cities is the entire absence of children of school age from the streets during the hours appointed for schools.

In the United States, the tendency has so far been

stronger towards free schools than towards compulsory attendance. So-called compulsory laws have been passed in several States, but they do not seem to have been anywhere thoroughly enforced ; and in a country where, if anywhere, the very logic of its institutions demands universal education, there have not been lacking those who have declared any attempts to compel attendance of children at school an infringement of the sacred rights of parents, the major part of such parents as are likely to need compulsion, being as a matter of fact, paupers, drunkards, or criminals whose existence is a burden or a danger to society.

There are not wanting, however, indications that sophisms like this, or that other which plausibly declares that compulsory school attendance is a violation of the spirit of our free institutions, are losing their force, and that enlightened communities, especially those in which are many large cities, are likely soon to insist that if owners of property are to be called on yearly to pay large taxes for educational purposes that they may be assured against the dangers of ignorance and vice, they shall at least receive that for which they pay. It can hardly be doubted that in the United States, as in other civilized countries, the elementary education which this century has offered to all, will be assured to every child, without any too tender regard for the sacred right of ignorant and vicious parents to rear their children in like ignorance and vice.

A most significant fact in the extension of education

during the present century, remains to be mentioned. This is the founding of the so-called Kindergarten by Friedrich Froebel in 1840. This new form of school, which, by guiding the playful activities of childhood into channels that shall be wholesome as well as pleasurable, is the practical embodiment of an idea, emphasized by many previous writers on education, makes a great extension of education downwards, to children at the most plastic age, and seems destined to produce the most marked effects on the development of coming generations. In this place it concerns us only as an additional fact in the widening of the sphere of education ; but the ideas of its originator, who was probably the most original educational genius of this century, have a wider reach than the Kindergarten, and we shall meet them in more than one future connection.

This however seems the fittest place to introduce a brief sketch of the career of one who must always hold a high place in the educational history of the 19th century.

Friedrich Froebel was born in a village near Rudolstadt in 1782. Schools seem to have had little to do with the training of his lively and unsettled, but always reflectively observant youthful years. At the age of eighteen, with some knowledge of natural history and mathematics, picked up by his own efforts while working for a forester, he betook himself to the university of Jena. During the brief time that his slender means permitted him to remain here, he seems

always to have been seeking confirmation of an idea that he had early conceived of the inner unity of all things. As he himself expressed it, he sought "guidance to an inner living connection and representation, of inward and comprehensive conformity to law."

Then came a brief period devoted to various bread-winning avocations, and to the care of his dying father. Finally, on his way to Frankfort to become an artist, he seems to have hit on the idea that formed his life-work; for he wrote to a friend engaged in agriculture, "Do thou give men bread; be it my effort to give men to themselves."

In Frankfort he met Gruner, the director of the model school in that city, and, at his suggestion, abandoned the idea of being an artist, and became a teacher in his school. Here he says, "I felt myself as it were in my long-missing element, and I was as happy as a fish in water."

In 1808, having become tutor to two high-born boys, he went with them to Yverdun, and for two years was a vigorous co-laborer with Pestalozzi. Here he not only gained the central idea of his master's system, the idea of genuine human development and its conditions, but he improved on Pestalozzi's idea of self-activity by extending it to the entire nature of the child: thus he demands that all the capabilities of the pupil's nature shall constantly be in a state of pleasurable activity, *adapted to each individual being*, that he may realize "in a peculiar, personal, and unique manner" his own special nature. Practically also, he

excelled Pestalozzi in his emphasizing of *successive* development,—such a development that the child should completely live through every one of its stages, and really gain what it is capable of imparting.

We may also refer to his experience at Yverdun, Froebel's principle, that "from the *deed*, from *doing*, must genuine education" and development of the human being begin"; that living, doing, and apprehending, go hand in hand in varying proportions in his culture, and that not merely should a lively curiosity be awakened by the presentation of things before ideas and words, but also that bodily activity, or doing corresponding thereto, should at once be elicited.

Returning from Yverdun in 1810, he spent two years in the study of languages in the universities of Göttingen and Berlin; served as a volunteer in the army of liberation in 1813, where he cemented memorable friendships with two of his future co-laborers; and, at the close of the war, became an assistant in the mineralogical museum of Berlin. In this last position, while communing with dead minerals, he conceived the idea of the law of "The Reconciliation of Polar Opposites," as the unifying law of life and therefore of education,—a law which those familiar with his writings will recognize as playing an important part in his theory of education.

In 1817, he initiated his work of *human education* in a school at Keilhan, beginning with six boys; his two old army friends, Middendorff and Langethal,

soon associated themselves to his undertaking; and the school grew apace until it numbered sixty pupils. But with its growing reputation hostility also arose: the government was asked to obliterate "this nest of demagogues": instead of doing this, a prominent school man was sent to examine the accused institution: his report was not merely favorable, but eulogistic: still the opposition gathered force, the attendance of the school declined, and in 1831, Froebel left it in the hands of a friend.

During the next nine years, he lived partly in Switzerland, where he promoted educational undertakings, and partly in Berlin. Here the idea of the Kindergarten first took form, and finally in 1840, the first school of the kind was opened in Blankenburg, near his birth-place. It sprang from his growing conviction, that "the rousing of the need to learn must precede learning, and that originating signifies a human activity, which has indeed welled forth from the inner life, but which in turn reacts upon its source, developing and quickening it;" and that "Education has and retains a healthy *basis*, conformable to its true nature, only where woman puts forth all her power for the development of the tender human bud in the life of the child."

This great original enterprise, however, though approved by cities and princes, did not escape opposition. It was accused of *atheism* and *socialism*; and on these grounds it was prohibited in Prussia in 1851. This prohibition was rescinded later, when the idea

of the Kindergarten had spread to many lands; but not in time to cheer its venerable apostle, who died in June, 1852.

Section III.

As has already been seen, the need of some professional preparation for the business of teaching, had come to be apprehended in the 18th century; and about the middle of that century, the first definite public provision for that purpose had been made in Germany, and somewhat later in Austria. We have also seen that the movement once begun, had attained considerable proportions, more than thirty Teachers' Seminaries having been established in Germany before 1800.

This movement has progressed during the present century, until now all schools in Germany are supplied with well-trained and thoroughly tested teachers. And not only is this true, but the example of Germany has been influential in most other European states and in America, provisions more or less effective for the training of teachers having widely been made. Of this France is a striking example. Already previous to 1833, according to Guizot, 47 primary normal schools had been established by the voluntary efforts of the towns or departments. These were adopted by Guizot as governmental institutions, whilst he also encouraged the nurseries for teachers afforded by various religious bodies. The system has had such growth that it has recently been reported that France has

now 171 well-equipped normal schools, being one for every 222,000 of her population.

A beginning of training schools in Great Britain was made in Glasgow in 1827 by David Stow, in his Normal Seminary which gained a great reputation; and already, not only are a considerable number of Training Colleges doing effective work, but professorships of pedagogy have been founded in two of the Scottish Universities, and provisions for a certain amount of pedagogic instruction have been made in the great English Universities.

In the states of Western Europe, the problem of supplying the schools with properly trained teachers is comparatively a simple one. Its elements are known, and admit of definite calculation. The population is so dense as to facilitate the easy collection of the children into schools of a considerable size. Teaching is a permanent and well-recognized employment which few or no teachers expect ever to change. Hence the numbers annually needed to supply vacancies by death or old age can be closely estimated, and the supply provided for in the institutions for the training of teachers.

In America the elements in the problem of the supply of teachers are by no means so simple. Outside of the cities and villages, the population is usually so widely scattered that schools of a proper size for economy of teaching are not easily gathered, thus calling for an undue multiplication of teachers. Again, teaching has not become recognized as a permanent

vocation. Few teachers look to it as their life work ; a large majority are women who abandon the calling when they marry, if not earlier ; the terms of service for which they are engaged, rarely more than a year, are often less ; in the year 1890, of the 31,703 teachers employed in the schools of New York, 7838, or nearly 25 per cent, taught less than a year ; and yet the State of New York is probably a favorable example of permanency of tenure.

Under such circumstances it is obvious that efforts to recruit the body of teachers closely resemble an attempt to fill a sieve with water. It is probable that to place the average term of service of those who teach at five years would be an over-estimate. Obviously then the solution of this problem by the agency of normal schools, which is successful in the Old World, cannot yet be successful in the New. Local and temporary needs, must for a considerable period still, be supplied from local and merely temporary sources ; and it needs no little pedagogic sagacity to do this as effectively as the circumstances permit.

The problem of providing teachers with some previous training was first attacked in this country on the side of local supply, by the designation in 1835 of eight academies in different sections of the State of New York to train teachers' classes, the State paying each academy \$400 for this service. The scheme, which, as first attempted, was somewhat too ambitious for its purpose, has undergone various modifications

and received a great extension, entirely justifying its wisdom by its results in promoting better instruction in the rural schools. In the year 1888-9 more than a hundred such classes were in progress, giving some training to 2,469 accepted candidates.

The more stringent regulations adopted in 1889-90 naturally caused some diminution in the number of both institutions and accepted candidates ; yet in 1890, 103 such classes were organized with a membership of 1827 pupils. The State has for a considerable period appropriated \$30,000 annually for the support of these training classes, and it is obvious how effective such a provision may be made for its special purpose.

In 1843 another and even wider-reaching means was devised for improving in some degree the local and temporary supplies of teachers for rural schools, a means which by its effectiveness in bettering the quality of instruction and in the wide diffusion of better educational ideals, has been generally adopted in the United States and Canada. This means is the County Institute, devised by Mr. J. S. Denman, who organized the first institute ever held, in 1843, in Ithaca, N. Y. Held annually for a week by experienced conductors, who give familiar illustrations of the most important principles of instruction and management, these institutes act the part of both elementary training school and teachers' association with young persons, who otherwise would in many cases have no pedagogic knowledge and little idea of the system of which they form a part.

Wisely adapted for their purpose as are the Teachers' Institutes and the Teachers' Classes in Academies and High schools, and great as is the good they have done in raising the character of the instruction given in the rural schools by young persons with whom teaching is only a temporary employment, it may readily be seen that they are but supplements, rendered necessary by a passing condition, to that more complete training for the work of the teacher which may truly be called professional. In this respect also, in the foundation and support of normal schools, the record of the United States has been very creditable, when we consider the great difficulty that has been mentioned of filling the ever-vanishing ranks of an evanescent vocation.

Massachusetts led the way in establishing normal schools by opening three in 1839 and 1840. New York followed her example in 1844 by founding a normal school at her State capital. At present Massachusetts has six such schools, and New York eleven; and 27 per cent. of the teachers of Massachusetts are graduates of her normals, while 13 per cent. more have had some professional training.

Not only have most of the other States now established normal schools, but it is becoming common for the considerable cities to recruit their corps of teachers by training-classes of their own, the members of which are usually graduates from the high schools. Moreover since 1873, professorships of pedagogy have been established in a considerable number of Ameri-

can universities, in which instruction is given in the science, art, and history of education to those who are to become teachers in colleges and high schools, and it is evident that the demand for this higher and more scientific instruction in pedagogy is rapidly increasing.

The few details that have been given concerning the rapid growth of professional training for teachers, are sufficient to show that Ratich's most valuable idea has borne abundant fruit in the 19th century.

Section IV.

We have seen that the Jesuits led the way in providing for frequent and careful supervision of the work of the teachers in their schools. Such a provision is now acknowledged to be of a degree of importance second only to that of the professional training of teachers, since it insures that the work of the schools shall correspond in a good degree to whatever educational ideal exists, and at the same time gives to teachers the assurance that their merits will be recognized whilst their faults will not escape notice.

Francke and von Rochow also had supervising officers for their schools; but I have at present little information as to the extent to which the idea of supervision by competent officers had spread during the 18th century. It is certain that it has become a marked characteristic of the school organizations of the present century, and that it is one to which much of the improvement in our popular schools is due. In countries like Germany and France, the system is

elaborate, extending from a Minister of Instruction with his council down through provincial bodies to local boards, thus giving to all classes of schools a close and careful supervision. In England also the work of her Majesty's Inspectors and their reports, have been of such a character as to attract attention far beyond the bounds of Great Britain.

In the United States where, from the too general lack of professional training, close supervision is most imperative, it has in too many cases become by no means effective. In most large cities and in very many smaller ones, there is careful local supervision, and its benefits are very apparent. Most, if not all of the States, also have State Superintendents of Instruction under various names; and quite a number have County Superintendents, but this is far from general; yet where such officers exist in fact as well as in name, the effects of their work are spoken of in high terms,—although in some cases, e. g. in Pennsylvania, the number of schools is so great as to render even annual visits of all the schools impossible.

In Massachusetts, where town commissioners have been charged with the nominal oversight of the rural schools, the results have been so little satisfactory, that in recent years, beside six able general inspectors of schools, contiguous townships have been encouraged to unite in securing competent superintendents; and the last report of that State shows that twenty-five such superintendent-districts have been formed.

In the State of New York, where great advances have been made, the supervision of rural schools has,

since 1856, been assigned to commissioners, elected every three years, one, or in some cases two, from each Assembly District. These officers examine and license teachers under the direction of the State Superintendent, from whose office, by a recent arrangement, the examination questions emanate ; collect and collate the reports of the schools ; distribute the school moneys ; take care that the school laws are obeyed ; settle questions of dispute in the schools, subject to an appeal to the State Superintendent ; and usually inspect every school at least twice in the year.

The duties here enumerated may readily be seen to be very important for the success of the schools, as well as for their effective and economical management ; and where such efficient provision is lacking, as it still is in too many cases, there the beneficial returns for money expended, will be found to be smaller than they should be. Even skillful workmen are found universally to do more and better work with careful oversight. In teaching alone is the expenditure of vast sums of money to promote the most vital interests of society, left to the unaided discretion of people the large majority of whom, though well-meaning, are young and inexperienced. Doubtless the strong practical sense of the American people will soon correct this anomalous state of things where it still exists, and this correction cannot be applied too soon.

Section V.

A prominent feature in the educational activity of the present century is the marked attention that has

been paid to Industrial and Technical training, and, in its latest decades, also to Manual Training. It has come to be felt that the modes by which the arts and trades have hitherto been acquired through a long and tedious course of apprenticeship, were marked by much of the rudeness and the waste of time which characterized the mediæval methods of instruction in literary subjects; and that more refined and effective methods were especially easy of application in the manual arts, through clear and explicit instruction in the ways and means of operations, to be followed by careful practice until skill in manipulation becomes habitual.

It has become obvious that thus by systematic training, better and more skilful artisans could be made in much less time, just as better physicians and lawyers can be educated more quickly by modern than by mediæval methods. Hence in several countries technical schools and schools of arts and trades have sprung up and flourished. In these it has been observed that, not only are the eye and the hand trained to observation and to executive skill, but also that the intellect is sharpened so as more readily and rapidly to grasp certain studies which are useful auxiliaries to technical skill.

Hence the question has seemed naturally to emerge whether some training of the eye and hand in the use of various tools, might not be made a useful auxiliary to the more purely literary work of all classes of children, whatever might be their future destination.

This last is the question of manual training, now so much agitated, and it is in a considerable degree distinct from the question of technical and industrial education ; since in the former, the training of eye and hand is considered more purely in its disciplinary, and in the latter more exclusively in its utilitarian aspects.

The idea of both manual and industrial training, though it has come to make so prominent a figure in the educational history of the 19th century, is by no means of very recent origin. Without going back to the well-known industrial feature of Solon's laws, it will not be inappropriate to bring together in one view some of the more important steps in the development of this idea in the last three centuries. Many of the facts have already been mentioned in the previous pages.

The earliest definite plan for an Industrial School that has come to my knowledge, is that of Sir Wm. Petty in 1647, which may be found in volume XI of Barnard's American Journal of Education. In this proposal, which was dedicated to the same Hartlib to whom Milton addressed his tractate on education, Petty gives an enumeration of the handicrafts to be attempted, and states the method of teaching and the studies which would be auxiliary to the manual arts. "Let in no case, he says, the art of drawing and designing be omitted, to what course of life soever those children are to be applied ; since the use thereof for expressing the conceptions of the mind seems, at

least to us, to be little inferior to that of writing, and in many cases performeth what by words is impossible."

Of the advantages that he sees likely to result from his proposed school, some are worth quoting. "Schollers and such as love to ratiocinate will have more and better matter to exercise their wits upon, whereas now they pusle and tire themselves about meer words and chymericall notions." "There would not then be so many fustian and unworthy preachers in divinity, so many quack-salvers in physick, so many pettifoggers in the law, so many grammaticasters in the schools, and so many lazy serving men in gentlemen's houses, when every man might learn to live otherwise in plenty and honour."

Besides these, he says, apprentices would be able sooner to master their trades, mathematicians would have better subjects to investigate, physicians would practice their profession more wisely, and lawyers and divines would handle their subjects more skilfully, from the knowledge which such training imparts. He alleges also the lively interest which both boys and girls have in *doing* and the means of doing, as a reason why such exercises should be set them, "as more suitable to the natural propensions we see in them." All this savors strongly of the modern advocates of manual training.

Still earlier than this project of Petty, Comenius had suggested that in his vernacular, i. e., elementary schools, "a general knowledge of the mechanic arts

should be given, that boys may better understand the affairs of ordinary life, and that opportunities may be thus given them to *find out their special aptitudes.*" We have also seen that near the close of the 17th century Mme. de Maintenon at St. Cyr laid great stress on feminine handicrafts, as had long been done in convents, considering "manual labor a moral safeguard and a protection against sin;" that Locke in 1692 insists that gentlemen should learn some trade in order to develop constructive power; and that in 1762 Rousseau emphasizes the same idea, giving as a reason that it would afford a resource in unlooked for misfortunes, and even illustrating this idea by causing his Emile to become a captive and slave where his manual skill proves a means of influence.

In 1771, Kindermann, later bishop of Leitmeritz, became practically the "Father of Industrial Education," by introducing into the schools of his Bohemian parish female handiwork for girls, and for boys practical instruction in the rural occupations of the neighborhood. These he used because he saw that thereby he enlisted the interest of children and parents in his schools, and thus promoted their literary efficiency.

In 1775 and also at a later period, Pestalozzi, as we have seen, undertook to unite the training of the senses, the mind, and the hand, and even fancied that poor children might be able to pay by their manual dexterity the expenses of their nurture and training.

- In "The Education of Man," Froebel in 1826

emphasized the need that the child "be trained early for outer work, for creative and productive activity," as a needful *means* for his *complete development*; and he says, "it would be a most wholesome arrangement in schools to establish actual working hours similar to the existing study hours, and it will surely come to this." Three years later, he pushed this idea farther by proposing to found such a school, in which the morning hours should be devoted to study, and the afternoon to varied work adapted to a wide range of local circumstances and wants. His well-known Kindergarten, founded in 1840, embodied this with other fruitful ideas, since it sought to develop manual capability in children whilst training the senses and instilling the germs of moral ideas.

In 1866, wood-working under the name of slöjd is said to have been made compulsory in the schools of Finland; and Sweden and Denmark seem thence to have derived the idea which other nations know chiefly from Sweden. Two years later, Cornell University opened its technical training department, and in the same year Victor Della Voss in Moscow solved the problem of manual instruction in classes. Dr. John Runkle in 1877 introduced this system in Boston; and since then, few meetings of teachers or school superintendents have failed to hear urged its claims, its merits, and its methods, and many schools upon this plan have been organized in cities.

France has gone farther than any other nation in the direction of manual training, since in 1882 a decree

was passed, devoting to it two to three hours per week for youth between the ages of seven and thirteen, prescribing a graded series of work ending with the use of wood-working tools and the simpler means of fashioning iron, and making such changes in the course of the normal schools as to fit teachers to give instruction in the use of tools.

Such then in brief is a sketch of the progressive development of the idea of industrial and manual training during the past two and a half centuries. As it is now urged by its most prominent advocates, manual training, sharply distinguished from industrial education, bases its claims chiefly on its value as a discipline, in giving interest and meaning to other school studies; in begetting respect for labor; in revealing while developing inherent aptitudes, thus widening the range of choice for a vocation; and in fostering the feeling of independence by a consciousness of the ability of self-support.

These are certainly weighty advantages; and, if experience shows that they can be widely realized, the movement will doubtless commend itself to the careful consideration of all progressive educators. The movement has encountered a vigorous opposition, and it is at present too much in the experimental stage to permit any decisive judgment as to its merits and its general feasibility. It is sufficient for our present purpose to indicate it, in connection with industrial and technical training, as one of the marked features of the educational history of the 19th century.

Section VI.

In studying the history of education in the 17th and 18th centuries, we have had occasion to examine the principles of the educational reformers, and to call attention to the causes that were likely to retard their acceptance in practice. It has been very obvious that these causes have actually so operated,—that, though the fundamental principles of right education which Comenius formulated were accepted and illustrated wholly or in part by many of the best minds in both centuries, they still remained too largely mere literary embodiments of ideas that had little influence on the inner life of the schools ; that the actual schoolmaster, wedded to his traditional routine, knew little and cared less about better methods of teaching ; and that hence no considerable advance had been made in reducing to practice the reformatory ideas, save in some isolated instances.

Francke had indeed done something, and von Röchow more ; Basedow had, even in the failure which his idiosyncracies courted, attracted great public attention to an experiment illustrating better and more productive methods of training the young ; and all these had doubtless contributed to the work of putting the public mind in that expectant and receptive attitude to which Dr. Dittes ascribes the remarkable effects of Pestalozzi's flaming enthusiasm and self-devotion. From this cause, and from the political condition of Germany in the first decade of this

century, the reformatory movement was henceforth to centre about Pestalozzi and to bear his name.

Against this movement thus reinforced, the stolid conservatism of the school-master has proved powerless. All the new educational agencies which the 19th century has created, have aided in disseminating and giving effect to the reformatory ideas, and have gained from them their chief significance. The newly-created normal schools and other agencies for training teachers have inculcated these principles in the new generation of teachers; the associations of teachers have impressed them by iteration on the careless and reluctant; the various governments have first adapted the organization proposed by Comenius to their own special needs, and have then enforced the practice of his ideas by the agencies of supervision through which they reach every school; the pedagogic activity of the century, through treatises, lectures, and essays, through text-books and reports, has carried everywhere the inspiration of the ideas of the reformers under their Pestalozzian name; and hence all these agencies are conspiring to make the universal spread of education a means of intellectual happiness to the young, instead of an ingenious device for inflicting on youth the ennui and torture which once characterized schools.

Like so many other educational improvements, Pestalozzianism gained its first hearty recognition in Germany, and spread thence into other lands, until now the school practice of all Europe and America is becoming

to an increasing extent influenced thereby. Everywhere methods are becoming more objective and observational; everywhere it is understood that teaching, to be successful, must seek the stand-point of the pupil's experience, and advance thence by steps adapted to his powers; it is generally acknowledged that memory should be the hand-maid of understanding, and that the intellectual activity of the pupil is the essential condition of the development of his powers; and enlightened educators everywhere recognize that the short-comings of the schools and the lack of vital interest in pupils, are due to the neglect or imperfect application of these principles.

It must, however, be confessed that skill in the application of sound educational maxims is still far less general than recognition of their value. This is especially true in our own country, because of the shortness of service and the imperfect training of the body of teachers. Yet the general acceptance of sound doctrine is a fact of vast importance, and is likely to lead finally to better practice. In educational periodicals and associations, there has been, within the past few years, a noticeable increase in the amount of judicious suggestion on methods of teaching various subjects; but with possibly a tendency to confound certain special modes of doing things with the fundamental methods of subjects.

English-speaking peoples have been more backward than the Germans or the French in recognizing the importance of the vernacular in instruction. Within

the past few years, however, a great change in this respect has been perceptible in the United States through an influence proceeding from our higher centres of learning. Perfunctory reading exercises in which ready recognition of words is cared for more than sense, and barren grammar lessons in which the substance of the language is subordinated to a more conscious knowledge of its form, are now largely felt to be very insufficient; and at present it is not uncommon to find in educational periodicals, disquisitions on the teaching of English, its literature, and its historic development, side by side with essays on modes of presenting Latin and modern languages.

Objective and laboratory methods of teaching the sciences of nature, are zealously urged in place of the too prevalent study *about* things in books. The prevailing German method of teaching these sciences, it may be said, is by lessons thoroughly illustrated by observation of things and by well-chosen experiments; and should we succeed in supplementing this instruction, in schools below the college, by series of laboratory exercises in which students themselves do the work, we shall probably be ahead of most of the world in the application of the principle "to learn by doing."

This principle is unquestionably sound, whatever difficulties may be encountered in its complete application with large bodies of students. It is doubtless easier to be applied in the teaching of languages than of science, from the nature of the subject-matter, and hence we shall not be surprised to find that more than

one new method of teaching languages has claimed the public confidence during this century.

In the first half of the century, the systems of Hamilton and Jacotot attracted much attention. The first, devised by James Hamilton, an English merchant, professed to give a fair degree of mastery of a language in an incredibly short time, through an interlinear translation of some familiar work, in which the *primitive* meanings of all the foreign words, even in idiomatic expressions, should be strictly adhered to, and the force of the inflected forms should be expressed ; and through the repeated use of whatever was thus learned. This curious modification of the method of Comenius and of a suggestion of Locke, was introduced first in New York in 1815, and later in England, making for a time a good deal of noise ; but after the death of its author in 1831, it sunk out of sight. It was significant chiefly as a reaction against the old grammatical system of teaching languages.

The method of the Frenchman Jacotot who died in 1840, if we may judge of it from the presentation given by his enthusiastic admirer and expounder, Joseph Payne, had much more both of originality and merit than that of Hamilton, besides being applicable to other things than language. Its chief maxim he thus expressed,—“ Il faut apprendre quelque chose, et y rapporter tout le reste,” which may be translated, —“ Master whatever you learn and proceed by the method of comparison.”

That this was the real import of his seemingly incomplete maxim, is shown by the four explanatory

words which he added to it, viz., learn, repeat, compare, verify, i. e., learn thoroughly; repeat often for sure memory; compare, to discriminate, systematize, and generalize, thus assuring clear and distinct ideas; verify by bringing principles to the test of facts, and by assuring the value of facts as organizable parts of a system of thought by bringing them under the principle to which they belong. Explained thus, the method of Jacotot is quite as applicable to science and history as to language which he had specially in view. Its chief merit lies in the demands which it makes upon the intellectual activity of the pupil in comparison and verification.

In the last half of the century we also hear much of the "Natural Method" of learning languages, by which should be meant the nearest practicable approximation to the way in which a child learns his vernacular, that is to say, by imitation and use. For school use, various systems have been devised to facilitate the acquisition of the words, idioms, and variable forms of language, and to accustom pupils to think and express thought with the new signs for ideas.

So far as they are helpful, all these systems must depend on the frequent and varied use of a growing stock of words and forms of expression, conformed to the principles of the given language. Inasmuch as they attack the grammar through the medium of the language, and master its forms and principles only so fast as they are needed, they are certainly more natural pedagogically than the method of approach-

ing the language through the grammar which they have so largely superseded.

Meanwhile these methods and the others that have been mentioned, owe their interest to us in this connection by no means wholly to their own intrinsic merits as improvements, but in an even higher degree to the testimony that they bear to the influence of the reformatory ideas in educational practice. Previous ages had shown little practical disposition to inquire about modes of procedure in instruction, and still less to devise and test new ones. The improvements that were made were limited in extent and limited in range of influence. Sound theories of education had far outstripped any effort to realize them in practice. The 19th century has shown a disposition to change all this; and besides, whatever of substantial improvement has been made reaches downward to the entire body of youth, instead of being limited to the small numbers in higher institutions.

In one highly important practical respect most schools are still far too backward. They regard their work too exclusively as instruction and too little as education, the development of inner worthiness of character. And yet, under conditions such as now tend to become prevalent throughout the civilized world, in which the will of the body of the people is becoming the real governing power, it is obvious that a well-balanced character and an illuminated conscience are vitally essential correlates of an intelligence trained and informed.

From this defect in education spring many public and private evils of which we hear constant and bitter complaints. The public schools, having the charge of youth at the most plastic age, when character may most easily be shaped, present the most effective agency by which these evils may gradually be corrected; but to do this, they must train and educate more, while not instructing less, or rather they must aim to educate through instruction and discipline.

Discipline also needs to be regarded, no longer in its lowest aspect as a means for preserving tolerable order in schools, but as a powerful agent for the guidance of the feelings and the will, for training to honorable and upright conduct, and for assuring correct moral estimates of actions. When these are assured, religious instruction will find something in the experiences of youth with which to build; for while religion forms the only sure basis for character, like other educative agencies, it must work with materials which the individual experience furnishes, in order to assure reliable results.

In speaking of the improvements in educational practice which the 19th century has initiated, we cannot fail to remark one of its most brilliant and promising achievements, in the systematic direction of the playful instincts of young childhood by Froebel and his disciples. That the plays of children should be made even more amusing and inspiring to them by a regulated association with their equals in age; and that, by a wise guidance in an affectionate spirit,

their efforts for amusement should be made effective in developing their physical capabilities, their senses, their feelings, and their intelligence, was certainly a wise and benevolent application of an idea which Quintillian dimly conceived, which Comenius proposed, and which Pestalozzi always cherished.

It is meeting with wide acceptance in both Europe and America; and, if used in a proper spirit as a means of healthful childish development, and not to promote mere precocity, it offers a cheering prospect for that future better condition of the race for which Kant looked. We ought to be able to expect from it the measurable correction of some of the evils which writers on education have in all ages deplored,—evils resulting from undirected or misdirected youthful activities, and from deplorable but indelible immoral impressions made upon plastic childish minds.

Section VII.

The Greek writers who treated of education laid great stress on the educational effects of music, as did all their countrymen, and the Roman writers repeat their opinions without any considerable practical sympathy with them. But from the fall of the Roman Empire down to the 19th century, comparatively little seems to have been thought or said about the purely disciplinary value of studies. When men contended about what should be taught to youth, their interest was centered on the merit or absurdity of studies in a literary point of view, on their intrinsic value as matters of knowledge or opinion, or on the manner in

which they might affect accepted religious beliefs. Latin was regarded as a necessary means for gaining knowledge, of which it was the accepted vehicle. Greek and Hebrew were to be mastered because in them was embodied the word of God.

Great stress was laid on useful knowledge, with a growing tendency in later periods to attribute greater utility to some kinds of knowledge than to others; but the effect of studies in developing the powers of those who mastered them was tacitly assumed rather than strongly emphasized. Certain unfavorable results of a too exclusive devotion to mathematics were, however, pointed out by Descartes and others. Certainly there is shown no disposition to bring into comparison and relative valuation various studies as means for disciplining the powers.

In so far as the efforts of the Innovators were directed to studies, they aimed to select such as would be most obviously useful to pupils in the course of life to which they were destined; where their attention was directed to a reform of methods of teaching by securing conformity to nature, they recognized an order in which subjects enlist the interest of children, and in which therefore they may most successfully be taught, but with little effort to estimate the special formal efficiency of this or that group of studies in cultivating certain forms of mental power or moral worth.

During the current century, there has obviously been a great change in this respect. There has been

a great increase in the subjects of lively human interest and important human use; and a still greater increase in the volume of knowledge that is available for the purposes of education. An intolerable pressure has thus been brought to bear upon all kinds of educational institutions, and educators have been forced to face the question of a selection among many desirable subjects of study.

We are in a period, therefore, in which it becomes imperative to take careful account of our pedagogic stock in trade, to consider all subjects dispassionately, and to so rearrange our programmes of instruction as to attempt only the practicable, while conforming them both to the present condition of culture and to the laws of growing mind.

In this readjustment, not only the classics are to be weighed which have long had a settled place, and the mathematics which during recent ages have won for themselves increased consideration; but also modern languages and their literature, history with the great increments of value which it has received from later investigations, and the sciences of nature which are so largely the growth of the 19th century. Connected with these last as intimately allied to them, are the sciences of man, psychology and ethics, both as subjects to be reckoned with in the selection of studies, and as indispensable aids in the solution of the problems which selection and arrangement present.

In all such periods of readjustment, two parties of diametrically opposite tendencies are sure to make

their appearance ; the Conservatives, wedded to that to which they are accustomed, deprecating any change, and ingenious to find reasons why there should be none, are certain to forebode dire disaster as the result of innovations on what the past has consecrated ; whilst the Radicals, zealous for a thorough reform, would sweep clean the ground, and build anew with fresh and often little-tested materials which they see the most convincing reasons for employing.

Between these opposing parties and their views, the contest is sure to be warm if not embittered ; but from their struggle the truth is pretty sure ultimately to emerge triumphant, though usually, for reasons that have before been given in a different connection, the victory is apt to be slow in declaring itself. Thus, at the beginning of the Renaissance period, we have witnessed the long and envenomed contest which scholasticism and its methods waged against the new spirit of the age with its better subjects and its newly-devised modes of presentation ; and we have been taught by this to expect that changes, to be most beneficial, must be slowly wrought.

The problem which is presented to the 19th century is by no means so simple as that which the Middle Ages offered to the newer time. Then the lines could be sharply drawn between scholasticism and the humanities. Now the conflicting, and in some cases, exclusively urged claims of four great groups of studies are to be duly weighed and carefully adjusted. It is evident therefore that the problem is a delicate

one, and needs to be approached in a wise and judicial spirit,—a spirit which would not needlessly reject the old because it is old, nor accept the new because it has the charm of novelty, but would judge, decide, and readjust with all the aids which the advancing science of man, and especially of the young man, can bring to a consideration so important.

It needs hardly to be said that the educators of the 19th century have attacked this problem with great zeal and vigor; it is to be regretted that it can not also be said that they have generally striven impartially to reach the truth rather than to sustain a preconceived opinion. A marked and most interesting feature of this “Conflict of Studies” has been a general disposition to discuss the various groups of studies, not merely in their material, but also in their formal aspect,—not to be content only with displaying the utility of some favored subjects, but to show how far and to what purpose they train the faculties of the growing youth to use all knowledge most effectively.

Thus we have already seen that Herbert Spencer, in urging the superior claims of sciences in education, does not deem it sufficient to illustrate what he thinks the superior utility of science for the right conduct of life, but goes on to show in what respects its disciplinary value is great. Thus Sir William Hamilton, in his trenchant criticism of the study of mathematics,* says “The question does not regard the value of

*Edinburg Review, Jan., 1836.

mathematical science considered in itself or in its objective results, but the utility of mathematical study in its subjective effects, as an exercise of the mind;” and he limits himself to proving that “none of our intellectual studies tends to cultivate a smaller number of faculties in a more partial or feeble manner than mathematics.” The touchstone that he applies is wholly formal and disciplinary efficacy.

In like manner the advocates of the classic languages—and they have been many—abandoning as no longer tenable the ground on which Montaigne and Locke considered Latin necessary for a gentleman, and on which Comenius and Milton proposed easier and speedier means for its mastery,—that is, the ground that it was indispensable as a medium through which to learn things useful,—have been ingenious, not merely in urging other and higher utilities, but also in setting forth its wide range of formal efficiency in the development of the faculties and capacities of youth.

This change in the point of view from which all studies are considered to an increasing degree in the 19th century, is chiefly significant because it marks a revulsion from the bald utilitarianism of the middle and later ages, to the true Christian ideal of education, the noble humanitarian ideal which looks upon the infinite worth of man as the destined heir of immortality as far more important than any of the temporary and earthly uses of his activities, and hence regards his development to the full perfection of his nature as the chief purpose of education.

Thus the historic races, after groping long for the chief end of man,—after seeking it in devotion to family, or caste, or state, in duty or utility, or in a meditative self-abnegation which aims to become more than man by being less through neglect of present duties,—are finding it at length in the duty of striving for the perfection of human nature, as a corollary of the truth, so long ago proclaimed by Christ, of the worth of the human personality.

Vigorous as have been the discussions concerning the relative value and the disciplinary efficiency of studies which this century has witnessed in all civilized countries, nowhere have such discussions been conducted with greater ardor than in Germany, and nowhere on the whole in a broader and more philosophic spirit. It must be confessed, however, that sometimes an unphilosophic heat has been displayed, and that somewhat too often, such illogical ad captandum phrases as "disinterested studies," and "Americanization of studies," have been used,—as though studies valuable for discipline were any less valuable because they happen to be useful,—or as though allusions to the possible crudities in thought or practice of a people engaged in taming a vast new country, had any place in a grave educational discussion.

This discussion has had the form of a struggle between the respective advocates of the Gymnasien and the Real-Schulen, and has been correlated with successive readjustments, of the programmes of these great secondary schools. In these readjustments, one of

which is even now in progress in Prussia, the disinterested observer may see a wise practical effort to give due weight to all the great groups of studies, viz., mathematics, history, the sciences, and languages, among which the vernacular is gaining a large place.

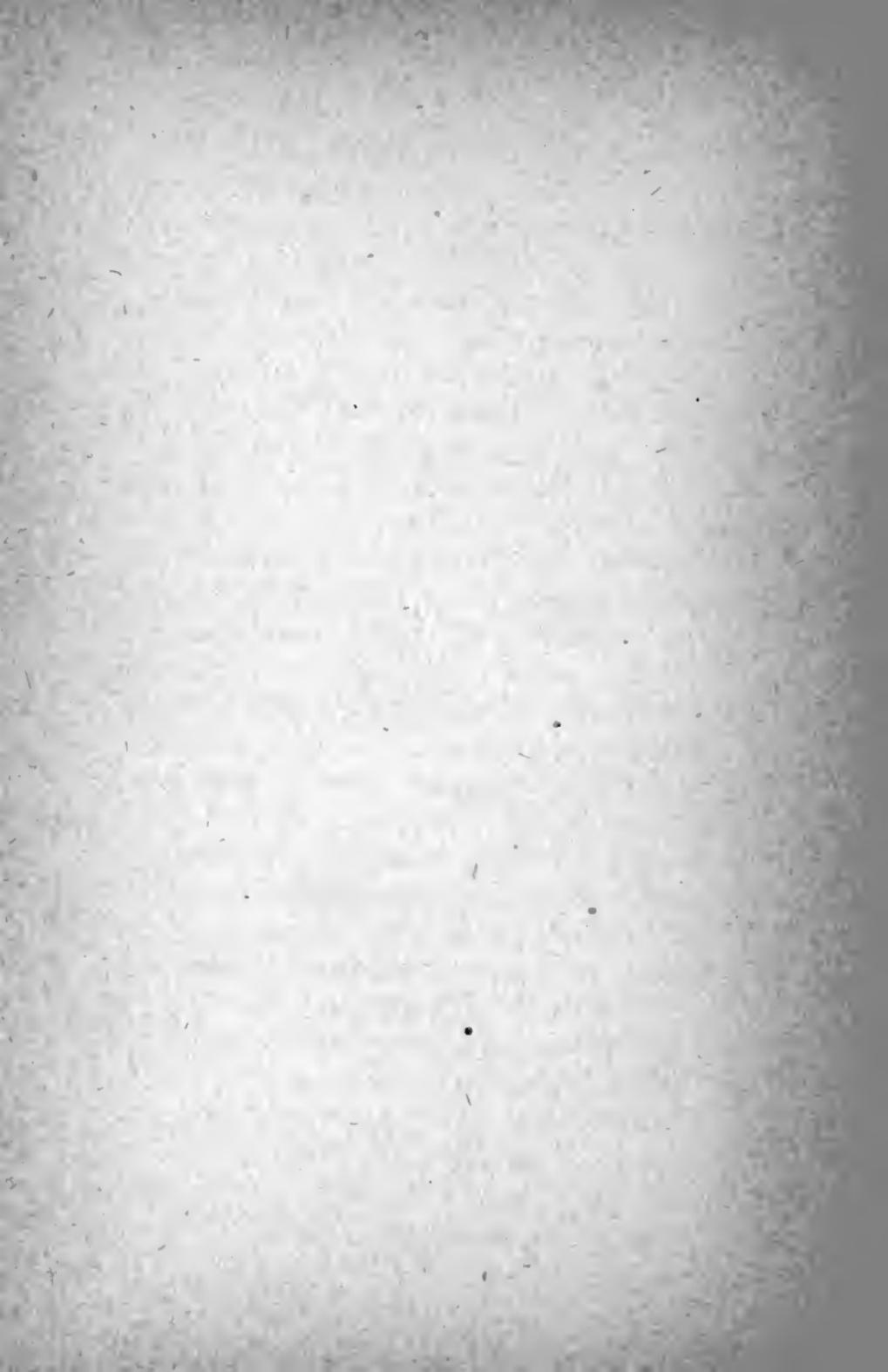
The struggle has not yet reached a definitive termination, but Professor Paulsen of Berlin, in his recent "History of Learned Instruction in Germany," regards the tendencies of the movement as sufficiently marked to justify a prediction as to its future course. He predicts that in the future Greek is likely to be relegated to the list of occasionally chosen electives; that Latin may retain its place, but in a more restricted form; that the time thus gained will be given, in part at least, to a more fruitful study of the vernacular and its literature in their historic development; and that there is likely to be a renewal of attention to the sciences of man,—philosophy and logic, ethics and politics. Of other groups of studies he says little, evidently taking for granted that they have conquered for themselves an amount of recognition that is not likely to grow less. The recent course of events seems already to promise a verification of his prophecy, at least in some particulars.

Whatever may be the final outcome of the controversy long waged between the humanists and the scientists, each party looking exclusively at one side of a great complex truth,—the world has thereby had impressed upon it the fact that all studies, rightly pursued, have a value to the student transcending

their mere utility ; and the distinct recognition which the 19th century has thus given to the humanitarian idea in education, may justly be considered the crowning point of its educational history. For, when we have solved the question how to make a man of the greatest worth in himself, then it will be found that both these other weighty questions are also solved, viz., how shall a man be made most useful ? and, what knowledge is of most worth ? That man will be most useful who has grown most completely up to the full measure of his powers : that knowledge will be of most worth, which, while ministering to his growth, has, by dint of thinking, been so incorporated with his entire series of experiences as to be in the fullest sense usable.

So far as I can judge, we have now surveyed the educational progress of the 19th century in the several aspects which will be likely most forcibly to impress the future historian. Should specimens of our pedagogical treatises, essays, and periodicals, of our proceedings, reports, and text-books, fall into the hands of the historian of some coming century, in any reasonably complete form, he will doubtless credit us with a degree of literary activity in the realm of pedagogy hitherto unprecedented,—while possibly expressing some mild surprise that we apparently laid so much stress on text-books. He will be likely to remark that our essays towards a consistent organization of schools, were creditable for an age relatively so little enlightened. He will call attention to the fact that

in the 19th century, education, from being the privilege of the few, was made the prerogative of the masses of the people; while possibly mentioning, as a remarkable illustration of the lingering rudeness of manners, the fact that it was in some cases found necessary to force so precious a boon as education on unwilling recipients. He will give due praise to our efforts in the nearly new field of training teachers for their profession, and of providing for some supervision of their work. He will probably give us credit for making a tolerable attempt, to train hands and eyes as well as mind, to provide for technical education, and to supersede by trades' schools the rude method of apprenticeship. He may possibly note that we made some observable progress in educational practice, but will be quite as likely to wonder that we did not make a more complete use of the rich stores of sound educational theory that were ready at our hands. And finally, should he think it worth his while to read as matters of antiquarian curiosity our eager disputes over questions which to him have assumed the character of axioms, he may chance to observe that the 19th century seemed to be dimly discovering the lofty humanitarian ideal which had been announced by the founder of its religion, and on which his more-favored age is acting with clear consciousness of its demands.



INDEX.

- American Education, early, 222, 327
Arnauld, Antoine, 167
Ascham, Roger, 97
Associations of teachers, 348

Bacon, Sir Francis, 115
Bain, Alexander, 336
Barnard, Henry, 347
Basedow, 288
Brothers of the Christian Schools, 227

Burgdorf, 305

Colet and St. Paul's School, 26
Columbia College, 329, 330
Comenius, John A., 148
Compayré, 336, 342
Compulsory Education, 40, 354
Conformity to Culture, idea of, 47
Conformity to Nature in Studies, 47, 126
Conventional Education, 197, 203
Culture Value of Studies, 334, 382

Descartes, 115
Dialogues of the dead, 211

Ecclesiasticism in Education, 113
Education.—H. Spencer, 337
Education des Filles,—Fenelon, 202
Education, over-estimates of, 153, 183, 291, 296
Education, popular, 324, 349
Emile, Rousseau—defects of 266
Emile, its chief merits, 265, 272
England, Education in, 32, 226, 318

English Secondary Education, 32, 318
Epistles of obscure men, 27
Erasmus, 52
Ernesti and the new humanism, 249

Fables of Fenelon, 210
Felbiger, J. I. von, 325
Female Education, 103, 197, 204
Fenelon, 202, 207
Fleury, 118
Francke, 233
French Education, 227, 318, 372
Froebel, 335, 352, 372, 381

Gargantua—Rabelais, 69
Gedike, reasons for the humanities, 251
Germany, Education in, 34, 228, 321, 350
German Secondary Schools, 34, 249, 321
Gesner and the new humanism, 249
Goettingen and the new humanism, 245, 250
Greek in Schools, 20, 288, 389
Gundling and the new University Spirit, 248

Halle, rise and influence of, 234, 248
Hamilton's (Jas.) Method, 378
Harvard, 224
Hecker, J. J. and real Schools, 240
Heyne in Goettingen, 251
History, Teaching of, 205, 211, 259

Humanistic Education,	19, 29, 90	Normal Schools,	243, 321, 364
Humanitarian ideal of Education,	387, 390	Object Lessons proposed by Rollin,	260
Humanism, the new,	249, 322	Observation, training of, 129, 160, 273	
Jacotot and his method,	378	Obstacles to Educational reform,	134
Janua Linguarum—Comenius,	162	Oratory of Jesus,	217
Jesuit Schools,	103	Orbis Pictus—Comenius,	161
St. Jerome on Education of girls,	197		
Kant and his ideas on Education,	279	Payne, Joseph,	336
Kindergarten,	356, 381	Pedagogic Seminar—Gesner,	245
Kindermann and Industrial Education,	321, 371	Pestalozzi, his principles, 299, 312, 375	
Lambert, Mme. de,	206	Petty, Sir Wm.,	193, 369
Lamy,	220	Philanthropinum,	290
La Salle,	227	Philosophers, influence in Education,	115
Latin in Schools,	157, 160, 167, 175, 191, 258, 389	Pietists,	232, 237
Leonard and Gertrude—Pestalozzi,	302	Positions—Mulcaster,	99
Locke, John.	181	Port Royal,	166
Luther, Martin,	40, 48	Princeely Education in France,	209
Magna Didactica—Comenius,	164	Princeton, College of, New Jersey,	329
Maintenon. Mme. de,	200	Rabelais.	68
Mann, Horace,	347	Ramus,	63
Manual Training,	157, 193, 274, 334, 368	Ratich,	140
Maria Theresa,	320	Real School, rise of,	129, 238
Massachusetts,	224, 364, 366	Reformers of Education, principles of,	126, 374
Melanchthon,	84	Renuehlin,	27
Milton, John,	171	Roehow, von, and rural Schools,	326
Money, relative value of,	4, 99	Rollin,	253
Montaigne,	74	Rosmini,	333
Mulcaster, Richard,	98	Rousseau,	261
Natural method in Languages,	379	Sadolet, Abp. and compulsory Education,	43
Neander, Michael,	95	Schoolmaster—Ascham,	97
Neuhof—Pestalozzi,	301	School Organization,	87, 91, 154, 351
Nicole,	167	Scotland, Education in,	229
New Humanism,	249	Secondary Schools, growth of	32
New York, Education,	223, 329, 351, 362, 366	Semler, Christoph,	239
		Senses, training of,	153, 260, 273
		Spencer, Herbert,	337
		Spener, P. J.,	232
		Stanz,—Pestalozzi,	304

- States General on Compulsory
Education, 43
Studies, readjustment of, 384
Sturm, Johann, 88
Supervision of Schools, 107, 333, 365
- Teaching as an Art—Ratich, 145
Teacher, ideal of,—Locke, 185
Teachers' Seminaries, 242, 360
Teachers' Institutes, 363
Teachers, Training of,
 105, 227, 236, 241, 333, 360
Text-books, American, 327
Thomassin, 221
Thoughts on Education—Locke, 181
Traité des Etudes—Rollin, 254
Trotzendorf, Valentine, 93
- Utilitarianism in Education, 131
University of Pennsylvania, 330
University Spirit, modern, rise of,
 247
University of State of New York, 330
- Vernacular in Instruction,
 128, 256, 323, 376
Vives, Ludovico, 60
- William and Mary College, 222
Wolf, Christian, 248
Wolf, F. A., 251
- Yale College, 329
Yverdun, 305

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